BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE AT CHENNAI

Appeal No. 77 of 2022

M/s. Varalakshmi Starch Industries (P) Ltd.,

Rep. by its Managing Director V.Anbalagan
Having its office at:
"Varalakshmi Tower"
No.127/1, 2nd floor,
Gandhi Road,
Salem- 636 007. ...Appellant

AND

Tamil Nadu Pollution Control Board
Rep. by its Chairperson
76, Anna Salai, Guindy Industrial Estate,
Guindy,
Chennai – 600032 & Ors., ...Respondents,

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Dated at Chennai on this the 14th day of December, 2024

Appellant

For Varalakshmi Starch Industries (P) Ltd.,

(V.Anbalagan)
Managing Director

BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE

AT CHENNAI

Appeal No. 77 OF 2022

M/s. Varalakshmi Starch Industries (P) Ltd.,
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Having its office at:
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AND

Tamil Nadu Pollution Control Board
Rep. by its Chairperson
76, Anna Salai, Guindy Industrial Estate,
Guindy,
Chennai – 600032 & Ors., ...Respondents

AFFIDAVIT ON BEHALF OF THE APPELLANT

I, V.Anbalagan,, Son of R.Varadharajan, Hindu, aged about 67years, having office at "Varalakshmi Tower", 2nd Floor, 127/1 Gandhi Road, Hasthampatty, Salem – 636 007, now temporarily come down to Chennai do hereby solemnly affirm and state as under: -

1. I am the Managing Director of the Appellant herein and as such fully acquainted with the facts and circumstances of the present case. I am filing this affidavit on behalf of the Appellant Company.

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

2. It is submitted that in continuation of the affidavit filed by the Appellant on 20.04.2023, with respect to the status of compliance of directions of the respondent, in Proceedings No.TNPCB/T2/F.025102/directions/water/2023 dated 16.02.2023 (Annexure-A51 – filed on 11.03.2023), Appellant herein is respectfully submitting the status of compliance as on this date as follows:

Directions were issued by TNPCB in the Proceeding No. TNPCB/T2/F.025102/Directions/Water/2023 dated 16.02.2023 after inspection conducted post the Stay order issued by the Hon'ble NGT. The Status of Compliance as on 08.10.2024 was reported in the Additional Report filed by the Respondent TNPCB on 05.11.2024 and the present status thereof reported by the Appellant are furnished below one by one in their seriatim.

It is respectfully submitted that this apart, the Appellant factory was also inspected on 08.10.2024 and 28.10.2024 by JCEE, EE, AEE from Salem JCEE office and DEE and AEE from Dharmapuri DEE Office. However, their inspection report thereof and ROA's dated 21.10.2024 of the samples of treated wastewater collected during this inspection has not figured in the status report submitted by the Respondent TNPCB before the Hon'ble NGT on 05.11.2024.

<u>TNPCB directions dated 16.02.2023 and their status report filed on 05.11.2024:</u>

1. **TNPCB Directions No.1:**

   The unit shall furnish a time bound action plan for completing the ETP revamping works, so as to satisfy the treated effluent standards as prescribed by the Board within a month's time.

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024:

"It was noticed that the treated effluent discharged in the green belt area is having TDS 2560 ppm (using portable meter), which exceeds the standards prescribed by the Board.

The samples collected from the ETP on 26.09.2024 & 08.10.2024 were sent for Analysis and RoA for the same is awaited.

The consolidated RoA of the twelve samples collected at clarifier outlet for the period from Dec 2022- April 2024 (i.e) after the issue of direction for closure & disconnection of power supply to the unit is enclosed vide Annexure-I.

The RoA reveals that the parameters such as TSS in one occasion, TDS & Chloride in two occasions, BOD in three occasions and COD in four occasions exceeded the standards prescribed by the Board.

Further, the unit in its reply letter dated 02.03.2023 for the Board's Direction dated 16.02.2023 has stated as follows

> ***".... We had already voluntarily commenced installation of secondary Treatment Plant as an extension to the existing ETP by installing Membrane Bioreactor Plant...."***

Also, the unit in its letter dated 01.01.2024, has stated that

> ***"..... We have voluntarily, without the insistence of TNPCB also imported and installed a high-tech Membrane Bioreactor (MBR) technology as an extension (tertiary treatment) to the existing ETP..."***

But, the unit in its letter dated 25.04.2024 has changed its stand and stated that

> ***" The MBR Plant is not in the ETP & it is an experimental plant for re-use of wastewater in our industry for which it is not included in the ETP".***

In this regard, it is submitted that the unit has not clearly stated the purpose of MBR system provided. **Further it has not maintained any logbook to ensure the continuous operation of the treatment components.**

Also, the unit has to ensure the discharge of treated effluent only through the EMFM provided so as to have accountability of the trade effluent generated, treated and disposed."

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

Status reported by the Appellant:

It is submitted that recently our unit was jointly inspected by DEE and AEE, TNPCB, Dharmapuri on 26.09.2024 and again jointly on 08.10.2024 and 28.10.2024 by JCEE, EE, AEE TNPCB from Salem office and DEE, AEE TNPCB From Dharmapuri office. 4 samples for tests were taken by them at

1.Outlet in Green Belt (Treated Waste Water),

2.Pond Water (Rain Water Harvesting Pond),

3.Proposed UASBR Tank Pit and

4.Collection Tank (Raw Effluent).

The test reports thereof were issued vide ROA No. 651/TNPCB/AEL-SLM/ 2024-25 dated 21.10.2024 for the above 4 samples. The said RoA indicates the TDS of treated wastewater as 1950 mg/l which is less than the prescribed level of 2100 mg/l and all the other parameters are also within the prescribed standards. The ROA report is enclosed in **Annexures No.1**

It is respectfully submitted that the above latest TNPCB'S ROA dated 21.10.2024 was not reported by the DEE, Dharmapuri in the Additional report filed on behalf of the Respondent on 05.11.2024 before the Hon'ble NGT and was stated that the results was still awaited when it was very much available with the DEE TNPCB Dharmapuri.

It is submitted that without relying upon the TNPCB's ROA dated 21.10.2024 on the sample collected on 08.10.2024 showing the TDS as only 1950 mg/l which is within the limit, the status report refers only to the TDS result of 2560 ppm of a 'portable meter' (very poor accuracy) which is not reliable.

And as per Annexure 1 of the Additional Report of the Respondent dated 05.11.2024, out of the Twelve samples shown in the Annexure 1, the result of the sample taken on 27.12.2022 alone (2 Years back) shows excess level in respect of TSS, TDS, BOD and COD and even this excess is because the sample was obtained from **partially treated** effluent **(Enclosed -Annexure -2)** as clearly

For Varalakshmi Starch Industries (P) Ltd

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mentioned in the TNPCB's ROA report itself. Another sample taken on 13.10.2023 shows the chloride as 1020 mg/l against the limit of 1000 mg/l, only very marginally exceeding and shows the TDS from the clarifier outlet as 2937 mg/l, but the same clarifier inlet sample is shown as 2404 mg/l **(Enclosed - Annexure -3)**. The function of clarifier is to decrease the suspended solids by settling in the bottom. The excess result from the clarifier outlet may be due to some error because out of 12 ROA's of samples reported from December 2022 till April 2024, the higher TDS in the final treated wastewater is reported in only one sample whereas in all the others ROA's the results are within the standards. So, the one odd result is negligible as the ROA's of treated wastewater from November 2023 to till date (for the past 1 year) are all within the standards with the latest last three ROA's showing TDS within the limits (26.09.2024 – 1900mg/l, 08.10.2024 – 1950mg/l and 26.11.2024 – 2088mg/l). **(Enclosed - Annexure -4)**.

It is further submitted that even the most recent ROA of the treated wastewater samples collected on 26.11.2024 issued by TNPCB on 06.12.2024 vide ROA No.802/TNPCB/AEL-SLM/2024-25 shows TDS as 2088mg/l and that all other parameters are within the prescribed standards. Further the same ROA also reports that the samples taken from the 3 Piezometric wells in the Green belt area (treated wastewater discharge area) of the Appellant Industry also shows all parameters including TDS of 1160mg/l, 1044mg/l and 1236mg/l as within the prescribed standards. **(Enclosed -Annexure -5)**.

It is also further submitted that the TNPCB alleges that the parameters noticed are high by comparing with the standards meant for surface water discharge of treated wastewater. While providing consent to discharge only on land for irrigation and also acknowledging that the Industry only discharges their treated wastewater in their own lands, TNPCB should compare with the standards applicable for 'onland discharge' rather than 'Surface water' discharge standards.

For Varalakshmi Starch Industries (P) Ltd

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Managing Director

By comparing with 'onland discharge standards' which is applicable and permitted to us, all the ROA results are within the standards.

It is submitted that our industry apart from treating the waste water in our ETP to meet the TNPCB prescribed standards, invested voluntarily on public interest without any directions from TNPCB in a MBR unit for recycling the waste water for production process for reducing raw water consumption and waste water discharge quantity . The Treated waste water from the ETP after subjecting to MBR treatment, the BOD comes down to less than 20mg/l, and the COD to 50 mg/l but the microbiological load are not reduced much upto standards meant for water used in food product manufacturing process. In the situation, our product Sago, Starch and Pappads all are FSSAI Certified food products. In addition, our Sago and Starch are ISI certified also. As per the FSSAI and BIS regulations, the micro biological level in the finished food has been fixed at very stringent level and the current higher micro biological level of the recycled water obtained from MBR Plant cannot be reduced upto the standards prescribed for water meant for Food Products processing. We are still carrying out some more modifications on experiment basis for reaching that and is taking time as such an attempt is first of its kind in any Starch industry anywhere in Tamilnadu and whole of India. But even without MBR, all the parameters of our treated waste water from the existing revamped ETP itself is within the standard prescribed by TNPCB. Since TNPCB repeatedly pressed for its progress, we said that this MBR unit is not under ETP. However, we have not dropped the MBR plant having invested several crores of rupees.

The EMFM Inlet and Outlet Flow meters reports are provided and log book also maintained and has been made available during each and every inspection. The inspecting officials, AEE, Dharmapuri have taken Xerox copies and soft copies of the data in their Pendrives. Since no acknowledgment for the receipt of the same is given to us, recently we have communicated EMFM Inlet and Outlet Flow

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(V. ANBALAGAN)
Managing Director

meters reports to them through email so as to ensure that data is made available to them on record.

As per the above, we have complied with the direction No. 1.

2. **TNPCB Directions No.2:**

The unit shall furnish a time bound action plant to replace all the seemaikaruvelam trees in the premises with the native plant species as recommended by the Agriculture Department along with the proposal for safe disposal of entire quantity of treated effluent with adequate green belt area within 15 days.

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024:

The unit in its letter dated 01.01.2024 has informed that SeemaiKaruvelam trees are removed in about 14 Acres in 30 Acres of land and replanted with native species in about 9 Acres land.

During inspection on 26.09.2024 & 08.10.2024, the unit is in the process of removing seemaikaruvelam trees and it was observed that the unit has replanted 9 Acres of greenbelt area with native species.

Further, in the layout of the Greenbelt area furnished by the unit it has mentioned that the removal of seemaikaruvelam trees will be completed before 2028 in a phased manner.

However, the unit has not furnished time bound action plan for the commencement and completion of planting tree saplings to replace all the SeemaiKaruvelam trees with the native species along with the proposal for safe disposal of entire quantity of treated effluent.

For Varalakshmi Starch Industries (P) Ltd

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Present status reported by the Appellant :

It is submitted that we have already long started replacing the Seemaikaruvelam trees with native spices in a Phased Manner as per the advise of the Hon'ble NGT as it will take minimum 5 years for any native spices to grow and absorb 35 KLD per Hectare per day of Treated Effluents. Due to this practical reason, the replacement of Trees could be done only in a phased manner without disturbing the production and consumption of the entire treated waste water.

As on date we have removed Seemaikaruvelam trees in 25 acres and replanted 18 Acres with Native trees in the last 2 years. Within another 4 years i.e. within the year 2028, surely, we will replace the balance Seemaikaruvelam Trees in the remaining 20 Acres.

In the year 2007, in the TNPCB renewal consent order, they advised for planting any suitable Tree for consumption of water. TNPCB did not at all specify the type of trees like now. So, the PCB should give time to allow the tree saplings to grow upto consuming entire treated water at 35 KLD. The baby tree would never consume such quantity of water that a fully grown adult tree would consume.

3. **TNPCB Directions No.3:**

The unit shall furnish the layout of the premises marking the green belt area that are being maintained for utilization of treated effluent along with plantation details such as number of plants, name of the plant species, plantation area etc., within 15 days.

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024:

The unit has furnished the layout of the premises marking the green belt area for utilization of treated effluent. **However, it has not furnished the plantation**

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Managing Director

details of fresh tree saplings such as number of plants, name of the plants species, plantation area etc.

Present status reported by the Appellant:

In the 18 Acres, the details of the Trees planted are:

- Neem saplings
- Magkani saplings
- Naaval saplings
- Pungam saplings
- Casuarina saplings

Total: 8600 nos of tree saplings within 14 acres with full grass grown.

Photos Enclosed **Annexure No.-6**

4. **TNPCB Directions No.4:**

   The unit shall cover the storage area of wet Tapioca Thippi by providing a shed within a month's time.-

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024:

The unit has provided separate shed to store the wet tapioca thippy. – Complied.

Present status reported by the Appellant

The roof shed for the storage area of the wet Thippy Yard has been completed.

Photo enclosed **Annexure No-7**.

5. **TNPCB Directions No.5:**

   The unit shall conduct Water and Wastewater audit through reputed institution like Anna University, Chennai/IIT Madras and furnish report to the Board. The time bound action plan for the same shall be furnished within a month's time, as the unit has made payments to the Anna University, Chennai to carry out ETP adequacy study only

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and <u>not for the Water and Wastewater audit as directed by</u> the Board vide proceeding dated 17.10.2022. –

6. TNPCB Directions No.6:

The unit shall conduct ground water quality study through reputed institution like Anna University, Chennai / IIT Madras in the green belt areas that are being maintained utilizing the treated effluent and furnish the report to the Board within a month's time.

<u>Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024 for 5 & 6:</u>

The unit has submitted the adequacy report of ETP obtained from the Anna University, Chennai.

The unit in its letter dated 11.07.2023 has informed that

"the project given to Anna university to conduct water audit waste water audit and ground water quality study they have raised demand that demand also we paid. The project will be completed within in six months"

Now the unit vide letter dated 25.04.2024 stated that

"the Anna University wants access to our entire production plant apart from the ETP and wants to inspect stage wise of our production plant which requires us to allow them access to our production machineries and production technology and knowhow. ***Since we fear that allowing third party access to our production unit will compromise our technology knowhow, the audit is held up."***

Therefore, the unit has not yet conducted the water and wastewater audit and ground water quality study in the green belt areas as directed.

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Present status reported by the Appellant for 5

We requested the Anna University Environment Department for Adequacy report. They conducted the study and given the report which is a combined report.

In the combined Adequacy report issued by Anna University after 6 months study, under para 3 para 2.1.1 "Manufacturing process of Tapioca Starch", they have discussed in detail about stage-by-stage water consumption and also the process with flow chart from Page No. 3-7 about the raw water consumption and how we are minimizing the water consumption by the process of recycling the water within the process. Also, the Mass balance of the outlet waste water is briefly discussed in the process flow chart for the manufacture of Tapioca Starch and Maize Starch flow diagram in Page No.7 **Annexure No.8**. If more specifically water and waste water audit is wanted, the Anna University requires entire manufacturing plant inside details with all data which are based on our valuable international Standard manufacturing technology. In India only in Tamil Nadu, only 3 industries are having such world high-tech machines with technology which is highly paid and valuable. But the TNPCB is enforcing this audit for our Industry alone and not for the other two industries located within the jurisdiction of TNPCB in Namakkal and Erode (Perundurai) Districts.

Present status reported by the Appellant for 6

Anna University also conducted the study of ground water. The test report is given in page No.30 Sl.No.12& 13 in the combined report in page no.46. They have given green belt area also. Further, the TNPCB officials themselves for the last three years have taken so many samples of groundwater from wells and borewells in our own green belt area, nearby jungles stream and Public wells in the surrounding one kilometer radius. The TWAD Board, Dharmpauri also collected groundwater samples from 8 locations surrounding one km radius of the industry on 30.11.2022 and tested in their own lab. Of the 8 samples, one sample was found to have only high fluoride content of 2.5mg/l against the limit of 1.5mg/l and in another sample the hardness alone was marginally higher at

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690mg/l against the limit of 600mg/l. The remaining 6 samples were found completely suitable for drinking purpose and all the 8 samples had TDS limit within the standards. No contamination based on our Treated waste water and no complaints were raised by them in this regard. **Annexure No.9**

7. **TNPCB Directions No.7:**

The unit shall provide adequate piezometric (monitoring) wells in the green belt area to monitor the ground water quality and furnish the report to TNPCB regularly in view of repeated compliant received. An action plan shall be submitted within a month's time.

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024:

The unit has provided piezo metric (monitoring) wells in the green belt areas to monitor the ground water quality. During inspection on 26.09.2024 & 08.10.2024, it was observed that no water was present in the piezo metric wells to monitor the quality of the water.

The unit has not provided piezometric wells of adequate depth and not provided piezometric well at north-eastern side of the green belt area, where the allegation of contamination of groundwater was raised by the complainant.

However, samples of ground water from the bore wells and open wells located in and around the unit's premises were collected on 16.05.2023 & 29.05.2024 to assess the quality.

RoA of the Ground water samples collected (from the open well/bore well) in and around the unit are enclosed vide **Annexure II.**

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

RoA of the samples collected on 16.05.2023 reveals that the parameters such as TDS & Chloride in the range value between 1024-16610 mg/L & 370-7998 mg/L respectively.

RoA of the samples collected on 29.05.2024 reveals that the parameters such as TDS & Chloride in the range value between 304-5490 mg/L & 15-3200mg/L respectively.

For continuous monitoring of impact of effluent utilized for growing trees in the green belt area, the unit has to provide adequate depth of Piezometric (monitoring) wells in the green belt area so as to enable to collect samples and furnish the RoA to the TNPCB regularly. However, the unit has not submitted any action plant for the same as per the Board's direction dated 16.02.2023.

Present status reported by the Appellant

It is submitted that we have provided 3 Piezometric (monitoring) wells of adequate depth in the Greenbelt Area as per PCB advice and design "Example of Generic Ground Water Well Design". The TNPCB officials have now inspected and collected sample from the 3 Piezometric (monitoring) wells available in the Industry's green belt area on 26.11.2024, (TDS 1- 1160 mg/l; 2- 1044 mg/l and 3 – 1236 mg/l and all other parameters are within the limits). (Already mentioned in the **Annexure No.-5.)** We are ready to create more piezometric wells wherever TNPCB insists after monsoon rain stops.

The status report says that there was no water in the Piezometric wells during inspection on 26.09.2024 and 08.10.2024. The reason is attributable to the fact that the treated effluent water got absorbed by the Seema karuvelam Trees in the green belt area leaving little water in the Piezometric wells that could not be drawnout using hand pumps during that inspection. Further the Piezometric wells have been provided in the Green Belt Area only as per the specification given by the TNPCB. On 26.11.2024, the TNPCB AEE has taken samples from the 3

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Piezometric wells and given ROA which shows TDS and other parameters are within limits (TDS 1160 mg/l; 1044 mg/l and 1236 mg/l respectively and all other parameters are within the limits).

Further it's stated that the samples of Ground Water collected by TNPCB from borewell and Open wells located in and around the premises on 16.05.2023 and 29.05.2024 reveals that the parameters such as TDS are higher. The high TDS reported in these wells cannot be attributed to our Industry as TNPCB have been regularly taking samples of our Treated Effluent water in the outlet of ETP and in the Green belt area and the results thereof which are all shown in **Annexure No.-10** shows the TDS parameters below the prescribed standards of 2100 mg/l. Further the higher parameters of TDS found in samples taken from outside Bore wells and Open wells are due to dumping of Pesticide waste, Fertilizer waste, Pharmaceutical waste and expired medicine and expired pesticide and Panchayat liquid and Solid sewage waste in to the Peeniyaru jungle stream. The entire liquid waste from the many residential areas of the Pappiredipatty taluk passes only into Peeniyaru Stream. (Enclosed photos, Videos and news article **Annexure No.-11**). Further before/upstream of the respondent industry, 5 to 6 Red Category Chemical Industries are all located along the Peeniyaru river generating solid chemical waste which all account for the higher parameters of TDS. Moreover, our industry uses only agriculture produce as Raw materials, Tapioca and Corn and manufactures food products such as Starch and Sago. The waste water generated in the process contains only Biodegradable organic substances. While we do not discharge our treated waste water outside our premises and our treated waste water having less than 2100 mg/l of TDS, further it was observed during inspection by TNPCB on 26.09.2024 and on 08.10.2024 that no water was present in the Piezometric wells to monitor the quality of the water" . From the fact that there was no sufficient water in the Piezometric wells to draw samples amply proves that the Seema Karuvelam trees in the surface absorbed the entire 35KLD per Hectare per day leaving no water to percolate into the piezometric wells. This apart, due to this reason, there are no

For Varalakshmi Starch Industries (P) Ltd

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Managing Director

possibilities of the treated waste water to flow to a distant place/wells situated 500 to 1000 meter away from our green belt area and get contaminated. Hence the reason for the outside wells having higher TDS is not attributable to discharging of our treated waste water with TDS not more than 2100 mg/l outside our premises which was also confirmed by the Committee headed by the DRO. Hence, the observation in the status report is not justifiable and we are not responsible for the high TDS in wells outside our premises. Whatever TDS around 2000 mg/l originate from raw water and also within the permitted level. Photos are enclosed **Annexure No.-12** as evidence to show that the cattle drink water from the ETP Aerator tanks (Partially treated waste water) and Green belt area (Fully treated waste water). This proves that our waste water is Organic. As per science, while passing the water through soil, the TDS content will reduce based on travel distance.

Thus, our industry whose wastewater is completely biodegradable is in no way responsible for the TDS & Chloride parameters in the Ground Water in the area as alleged in the status report.

8. **TNPCB Directions No.8:**

The unit shall stop discharging treated / untreated trade effluent through the outfall located near ETP area into the Penniaar canal immediately and shall ensure that there is no access for the treated / untreated trade effluent to nearby water bodies, outside the premises either directly and indirectly. The action taken in this regard shall be reported to the Board within a week's time.-

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024

During inspection of the Board's committee on 27.12.2022, an outfall was noticed near ETP area and the sample of water was collected for analysis. The ROA of the water sample revealed that the parameters such as BOD and COD exceeded the inland surface water standards prescribed by the Board.

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However, during joint inspection of the said outfall on 08.06.2023by the AE, TNPCB along with the AE, PWD, WRD, the pipe (outfall) was found removed.

During inspection of the unit on 26.09.2024 & 08.10.2024, the same was ensured and found that there was no outfall observed in the said location.

Present status reported by the Appellant

The District Revenue Officer reported to The Honorable District Collector in Letter No.ந.க. எண் 0013/2022 த.நா.மா.க.வாரியம்நாள் 23.01.2023 based on 12 Departments joint inspection of our factory with farmers and with reference to the complaint by P.Suresh stated (**ஆய்வின் போது மேற்கண்ட இத்தொழிற்சாலைகளில் இருந்து எவ்வித தொழிற்கழிவு நீரும் வெளியேற்றப்படுவதில்லை என கண்டறியப்பட்டுள்ளது**).

The pipe line found was for Stream / Rain water discharge only of the over flow of the rain water harvesting pond. Now it is removed.

9. TNPCB Directions No.9:

The unit shall dewater the stagnation of water in the pit provided for the proposed anaerobic reactors immediately and shall maintain the sludge drying beds properly and shall report to the Board within a week's time.

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024

"During inspection on 26.09.2024 & 08.10.2024, **there was stagnation of water noticed in the huge earthern pit provided for the proposed anaerobic reactors.**

Also, it was noticed that the stagnated water in the earthen pit is having TDS 1510 ppm (using portable meter). Also, the samples were collected from the pit and sent for Analysis.

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

RoA of the samples collected in the proposed anaerobic pits on 31.08.2023 and 20.02.2024 is enclosed vide Annexure III.

The RoA of the samples collected from the above pit on 31.08.2023 and 20.02.2024 reveals that the TDS levels –were 2288 mg/lit & 844 mg/lit respectively, which indicates that there is a chance of mixing of effluent in the above pit.

Furthermore, the sludge removed from the sludge drying beds were disposed adjacent to the ETP area on open land in a haphazard manner. (photocopy enclosed)."

Present status reported by the Appellant

The spring water available in the pit (10 Metre depth) of the proposed anaerobic reactors regularly was dewatered. Further the deviation shown on the samples drawn on 31.08.2023 is only 2288 mg/l which is little higher than the permitted level of 2100 mg/l and the result of samples taken on later date that is 20.02.2024 is 844 mg/l far below the prescribed level. This indicated that there is no mixing of effluent in the pits. The water from the pit having been dewatered, the issue reported does not persist. The 5 Nos. of sludge drying beds are also being properly maintained and the biological sludge in the adjacent area of the ETP has since been cleared and planted with Native trees which was verified by the AEE, TNPCB Dharmapuri during inspection on 26.11.2024. Photos of Anaerobic pits and ETP adjacent area enclosed in **Annexure No.-13**

10. TNPCB Directions No.10:

The unit shall check the stability of the ETP, by engaging reputed institution like Anna University, Chennai / IIT Madras and furnish the report to the TNPCB within a month's time

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024

The unit has furnished the report on "Assessment of the structural condition and strength of structure of various treatment units" **except Anaerobic lagoon**

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

carried out by the Department of Civil Engineering, Government College of Engineering, Salem.

Complied

Present status reported by the Appellant:

Complied

11. TNPCB Directions No.11:

The unit shall install / maintain Electro Magnetic Flow Meter with computer recoding arrangement at the inlet and outlet of the ETP within a month's time and shall furnish monthly report to the Board

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024

During inspection on 26.09.2024& 08.10.2024, it was observed that the unit has provided two Electromagnetic flow meters at the UASBR inlet and one at the MBR outlet with computer recording arrangement.

The unit has not maintained any logbook so far to ensure the continuous operation of ETP.The unit in its letter dated 01.01.2024 and 25.04.2024, has furnished flow readings for the period from October to December 2023 and January to March 2024 respectively in editable form only.

Present status reported by the Appellant:

EMFM installed both in inlet and outlet of ETP. Reports of EMFMs reading at the inlet and outlet of the ETP till October 2024 were submitted to TNPCB, Dharmapuri. It is available for verification. Log book is being maintained and inspected by the officials during inspection. The readings are being sent by Mail to DEE, Dharmapuri.

12. TNPCB Directions No.12:

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

In order to ensure the compliance of the above directions 1 to 11, the unit shall furnish a Bank Guarantee for Rs.50 Lakhs valid for one year to the TNPCB (Format enclosed)-

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024

The unit has not furnished bank guarantee of Rs. 50 Lakhs as directed. Instead, it has **requested to waive off the Bank Guarantee for Rs. 50 Lakhs, since the unit has invested 420 lakhs in setting up of secondary treatment plant.**

However, the unit in its letter dated 25.04.2024 has changed its stand and stated that **"The MBR Plant is not in the ETP & it is an experimental plant for re-use of wastewater in our industry for which it is not included in the ETP"**

Present status reported by the Appellant:

As explained above, the ETP is well revamped and meeting the prescribed discharge standards which has also been confirmed by the various ROA reports of TNPCB of samples collected almost every month for the past two years. **Already mentioned in the Annexure No.-10** And also about 50% of the seema karuvelam trees removal is over and the balance we will continue removal and replanting activity in a phased manner. Thippi yard roof construction, obtaining Stability report, obtaining Anna University Adequacy report and other improvement directions such as Storm water drains, flowmeter recordings have been completed.

So, we are requesting for waiver of furnishing the Bank Guarantee for Rs.50 lakhs which would cast financial burden on us since BG can be obtained from Bank only against 100% margin money from working capital.

With regard to the MBR Plant, we are continuing certain modifications on experimental basis for reaching the water quality upto food product process water standards. After investing several crores of rupees into the MBR unit, the work progress will not be halted for any reason.

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

So, we request the Honourable NGT that this condition of furnishing Bank Guarantee of Rs.50 lakhs may be caused to be waived.

13. TNPCB Directions No.13:

The unit shall ensure the compliance of all the above said conditions and furnish the compliance report to the Board so as to examine the issue of renewal of consent to the unit

Status of compliances as on 08.10.2024 filed by the respondent on 05.11.2024

- Complied with the direction in Serial No-8,10
- Partially Complied directions in Serial No -3
- Not Complied Directions in Serial No. – 1,2,5,6,7,9,11,12.

Present status reported by the Appellant:

As discussed above, other than Point No. 2 and 12, all other directions have been complied with and the evidences are enclosed. For Point No.2, we undertake to comply with the directions of removal of seemai karuvelam trees and replanting with native trees in a phased manner since this cannot be implemented overnight without affecting the production. Regarding point No. 12, as we have complied with all other directions, we are requesting for waiver from furnishing Bank Guarantee of Rs. 50 Lakhs.

In this context we wish to further submit that the online renewal applications were returned initially on 18.10.2021 during Covid period with 2 directions. Then as many as 50 directions were issued for compliances on subsequent returns. Now the latest application has been returned on 16.10.2024 after 6 months from the date of application with just 6 Scrutiny directions for compliances which are in the nature of improvement compliance/directions only. This goes to prove that we have complied with the direction issued by the TNPCB with regard to the rest of them.

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

The respondent submits before the Honorable NGT that there are TWO other large scale industries in the same field with bigger capacity than our industry. Our sales turnover is about Rs.100 Crore per annum, but the other two industries have Rs.300-600 Crore turnover engaged in the Starch and Sago Products.

One is located in the District of Namakkal namely Shri Varalakshmi Sago Foods (P) Limited with waste water output of 540 m3 / day, located in an overexploited area and TNPCB even after G.O.142/2014 of PWD regulating exploitation of groundwater allowed expansion of this factory by issuing Consent for establishment and for operation multiple times without NOC from PWD ground water authority. **Annexure No.-14**. The other factory in Erode District namely SPAC Tapioca Products with waste water output of 840 m3 / day. These two factories also are surrounded by water bodies but TNPCB has prescribed onland discharge standards for their treated waste water. This is the case with several other around 400 hundreds smaller units in the same field in Salem, Namakkal, Erode District. Our industry alone has been singled out and the cost of compliances of stringent measures imposed by the respondent escalates the capital investment and cost of such standard treatment all increase the product cost by about Rs.500/- per metric ton of our finished product resulting which disables our 100% capacity utilization resulting in failure in the market and there is no level playing ground for our industry. TNPCB in their affidavits and reports in Honorable National Green Tribunal are comparing only small level sago and starch manufactures in the Dharmapuri District only. So my humble request is that the TNPCB has to compare with our equal capacity similar industry in the whole TNPCB jurisdiction. Our humble request with Honorable National Green Tribunal, Southern Zone is that any directions about waste water treatment and discharge standard should be common and uniform for all Sago, Starch industry in whole Tamilnadu for matching the cost of product uniformly.

In a four-member committee report comprising of Environment, Urban Development, Industries Department and TNPCB released by Govt of Tamilnadu

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

to the Hon'ble NGT, in the year 2018, titled as Action Plant for Rejuvenation of 1) River Thirumanimutharu, Salem to Papparapatti Stretch and 2) River Vasista Manivilundhan to Thiyaganur Stretch for the two scheduled rivers contaminated due to the Sago and Starch industries. Enclosed two river report **Annexure No.-15.** But the TNPCB is targeting only our industry which is not in both the above river side. Also, The TNPCB and the District Level Committee has confirmed that our industry does not discharge waste or treated waste water in the jungle stream also.

Our humble request to the Hon'ble NGT is that any condition/standards for treated effluent and general conditions/ special conditions/ additional conditions all should be uniform for all the Sago and Starch industries coming under TNPCB, Tamil Nadu Jurisdictions without any discrimination especially for starch, sago and its downstream product manufacturing industries to match the cost of product uniformly through Government regulations.

On S.no.1 directions of TNPCB, it has been proved that as per TNPCB's RoA reports upto November 2024 that the treated waste water all are within the standards. And with regard to S.No.8, the TNPCB and 12 Departments including TNPCB joint report and the DRO Dharmapuri also confirmed that no waste water and Treated water is discharged outside our factory premises.

Therefore, it is humbly prayed that this Hon'ble National Green Tribunal may be pleased to pass such further order or other orders so as to cause revocation of the closure order by TNPCB (Proceeding No.: TNPCB/T2/F.025102 / DMP/ Closure / Water/2022, dt:08.11.2022) issued on 08.11.2022 by the TNPCB and render justice.

Our last CTO renewal application resubmitted in the OCMMS portal on 25.04.2024, the DEE Dharmapuri, TNPCB has returned the application after 5

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

months 21 days (16.10.2024) with 6 directions for compliance which are improvement directions only.

It is further prayed that this Hon'ble National Green Tribunal may also be pleased to issue directions to the TNPCB to renew our Consent order forthwith.

For Varalakshmi Starch Industries (P) Ltd

(V. ANBALAGAN)
Managing Director

Annexure - 1

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 651 /TNPCB/AEL – SLM/2024– 25, Dated: 21.10.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	08.10.2024 at 05:10 PM and 05:35 PM
3.	Date and time of receipt at Lab.	09.10.2024 at 10:10 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	1 No. of Trade effluent Sample & 1 No. of Pond water sample
6.	Date of Analysis	09.10.2024 - 21.10.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240180	1973	Outlet in green belt	-
DEEDMP-240181	1974	Pond water (inside the premises)	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240180/1973	DEEDMP-240181/1974	
1.	pH at 25°C	Number	7.99	7.49	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	16	8	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	1950	720	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	860	300	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	31	<5	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	4.0	3.6	IS 3025 (Part-44)
7.	COD	mg/l	60	40	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	1.12	2.80	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	4.48	5.04	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	0.789	0.978	APHA 23rd Edn 2017 (4500 NO_3-B)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240180/1973	DEEDMP-240181/1974	
11	Total Hardness as $CaCO_3$	mg/l	850	550	APHA 23rd Edn. 2017 (2340 C)
12	Calcium as Ca	mg/l	140	80	APHA 23rd Edn. 2017 (3500 B)
13	Magnesium as Mg	mg/l	122	85	APHA 23rd Edn. 2017 (2340 C)
14	Alkalinity as $CaCO_3$	mg/l	80	80	APHA 23rd Edn. 2017 (2320 B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

21/10/24

Environmental Scientist

Authorized Signatory

21/10/24

Assistant Director (Lab),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 651 /TNPCB/AEL – SLM/2024– 25, Dated: 21.10.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	08.10.2024 at 06:30 PM and 06:40 PM
3.	Date and time of receipt at Lab.	09.10.2024 at 10:10 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	1 No. of Pit water Sample & 1 No. of Trade effluent sample
6.	Date of Analysis	09.10.2024 - 21.10.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240182	1975	UASBR Tank Pit-8 (proposed anaerobic reactor unused pit)	-
DEEDMP-240183	1976	Collection Tank	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240182/1975	DEEDMP-240183/1976	
1.	pH at 25°C	Number	**7.36**	**3.83**	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	**4**	**3468**	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	**970**	**5016**	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	**400**	**950**	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	**32**	**187**	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	**9.6**	**18800**	IS 3025 (Part-44)
7.	COD	mg/l	**40**	**30000**	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	**4.48**	**14**	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	**11.2**	**30.80**	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	**1.551**	**6.399**	APHA 23rd Edn 2017 (4500 NO_3-B)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240182/1975	DEEDMP-240183/1976	
11	Total Hardness as $CaCO_3$	mg/l	750	1550	APHA 23rd Edn. 2017 (2340 C)
12	Calcium as Ca	mg/l	180	120	APHA 23rd Edn. 2017 (3500 B)
13	Magnesium as Mg	mg/l	73	304	APHA 23rd Edn. 2017 (2340 C)
14	Alkalinity as $CaCO_3$	mg/l	60	Nil	APHA 23rd Edn. 2017 (2320 B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

21/10/24

Environmental Scientist

Authorized Signatory

24/10/24

Assistant Director (Lab),
AEL, TNPCB, Salem.

- End of Test Report –

TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY
No. 76, MOUNT SALAI, GUINDY,
CHENNAI - 32.

TEST REPORT

NABL TC-10097 ISO 45001 : 2018

ULR - TC100972200000820F
ROA No.December-2016 - December-2018/2022 - 2023/ Dated:02.01.2023

Name and Address of the sender	:	The Additional Chief Environmental Engineer, Tamil Nadu Pollution Control Board, Guindy, Chennai-32.		
Nature and number of samples	:	3 Numbers of Complaint Samples	Sample quantity 2.5 L	Sealed and fastened in 2.5 L polythene container
Date and time of sample collection	:	27.12.2022 12.50 PM to 1.30 PM	Date & time of sample receipt at the lab	28.12.2022 at 10.30 AM
Point of Collection	1	ETP - aeration Tank outlet / Partially Treated		
	2	Rain water harvesting pond / -		
	3	ETP - Clarifier / Partially Treated		
Analysis Starting date	:	28.12.2022	Analysis Completion date	02.01.2023

Sl. No.	DEE Code No. / Lab Code No. / Parameters	Unit	DMP-04 Dec-2016	DMP-05 Dec-2017	DMP-06 Dec-2018	Test Method
1	pH @ 25°C	Number	7.60	7.23	7.60	APHA 23rd Edn 2017, 4500 H^+ B
2	Total Suspended solids @ 105°C	mg/L	384	34	564	APHA 23rd Edn 2017, 2540 D
3	Total Dissolved Solids @ 180°C	mg/L	–	746	–	APHA 23rd Edn 2017, 2540-C
4	Fixed Dissolved Solids @550°C	mg/L	3556	–	3016	APHA 23rd Edn 2017-2540 E
5	Chloride as Cl	mg/L	330	190	350	APHA 23rd Edn 2017, 4500-Cl B
6	Sulphate as SO_4	mg/L	**	45	**	APHA 23rd Edn 2017 4500-SO_4^{2-} - E
7	BOD (3 days @ 27°C)	mg/L	360	9	352	IS 3025 (Part - 44) :1993, Reaff: 2009
8	COD	mg/L	936	32	824	IS 3025 (Part – 58), Reaff 2006
9	Total Kjeldahl Nitrogen	mg/L	185.92	16.8	350.56	APHA 23rd Edn 2017, 4500 - N- B
10	Percent Sodium	%	23	67	24	AEL-CHN/SOP/W28 Issue No.01/Date:.14.07.2014

Note: < BDL indicates Less that minimum detectable limit.
The Test results relate only to the items tested as received.
** - Sulphate could not ascertained due to interference

31.1.23

Authorized Signatory
[AD (L)/ Dy.CSO]
[Sankara Subramanian, B. Helen Mary]

3/1/23

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 592/TNPCB/AEL – SLM/2023– 24, Dated. 20.11.2023

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	13.10.2023 at 12:45 PM and 12:50 PM
3.	Date and time of receipt at Lab.	13.10.2023 at 06:45 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	16.10.2023 - 20.11.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/224/13-10	2304	Clarifier Inlet	-
BLA/225/13-10	2305	Clarifier Outlet	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			2304/BLA/ 224/13-10	2305/BLA/ 225/13-10	
1.	pH at 25°C	Number	7.94	7.86	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	96	48	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	2404	2936	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	777	1020	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	73	83	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	72	24	IS 3025 (Part-44)
7.	COD	mg/l	160	88	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	1.68	1.68	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	3.92	3.36	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Total Hardness as $CaCO_3$	mg/l	700	1150	APHA 23rd Edn. 2017 (2340 C)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			2304/BLA/ 224/13-10	2305/BLA/ 225/13-10	
11	Calcium as Ca	mg/l	100	100	APHA 23rd Edn. 2017 (3500 B)
12	Magnesium as Mg	mg/l	219	219	APHA 23rd Edn. 2017 (2340 C)
13	Alkalinity as $CaCO_3$	mg/l	852	672	APHA 23rd Edn. 2017 (2320 B)
14	Nitrate Nitrogen as NO_3	mg/l	0.205	0.227	APHA 23rd Edn. 2017 (4500 NO_3-B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

27/11/23

Environmental Scientist

Authorized Signatory

27/11/2023

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

Annexure - 4

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 644 /TNPCB/AEL – SLM/2024– 25, Dated: 21.10.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	26.09.2024 at 12:20 PM and 12:30 PM
3.	Date and time of receipt at Lab.	26.09.2024 at 05:30 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	26.09.2024 - 21.10.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240171	1855	MBR Outlet	-
DEEDMP-240172	1856	Outlet of green belt	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240171/1855	DEEDMP-240172/1856	
1.	pH at 25°C	Number	8.07	8.16	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	4	4	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	1940	1900	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	630	650	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	31	75	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	4.6	4.0	IS 3025 (Part-44)
7.	COD	mg/l	60	40	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	3.92	1.68	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	6.72	3.92	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	7.351	6.054	APHA 23rd Edn 2017 (4500 NO_3-B)

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240171/1855	DEEDMP-240172/1856	
11	Total Hardness as $CaCO_3$	mg/l	500	500	APHA 23rd Edn. 2017 (2340 C)
12	Calcium as Ca	mg/l	20	60	APHA 23rd Edn. 2017 (3500 B)
13	Magnesium as Mg	mg/l	109	85	APHA 23rd Edn. 2017 (2340 C)
14	Alkalinity as $CaCO_3$	mg/l	48	44	APHA 23rd Edn. 2017 (2320 B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

21/10/24

Environmental Scientist

Authorized Signatory

21/10/24

Assistant Director (Lab),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 651 /TNPCB/AEL – SLM/2024– 25, Dated: 21.10.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	08.10.2024 at 05:10 PM and 05:35 PM
3.	Date and time of receipt at Lab.	09.10.2024 at 10:10 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	1 No. of Trade effluent Sample & 1 No. of Pond water sample
6.	Date of Analysis	09.10.2024 - 21.10.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240180	1973	Outlet in green belt	-
DEEDMP-240181	1974	Pond water (inside the premises)	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240180/1973	DEEDMP-240181/1974	
1.	pH at 25°C	Number	7.99	7.49	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	16	8	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	1950	720	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	860	300	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	31	<5	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	4.0	3.6	IS 3025 (Part-44)
7.	COD	mg/l	60	40	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	1.12	2.80	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	4.48	5.04	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	0.789	0.978	APHA 23rd Edn 2017 (4500 NO_3-B)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240180/1973	DEEDMP-240181/1974	
11	Total Hardness as $CaCO_3$	mg/l	850	550	APHA 23rd Edn. 2017 (2340 C)
12	Calcium as Ca	mg/l	140	80	APHA 23rd Edn. 2017 (3500 B)
13	Magnesium as Mg	mg/l	122	85	APHA 23rd Edn. 2017 (2340 C)
14	Alkalinity as $CaCO_3$	mg/l	80	80	APHA 23rd Edn. 2017 (2320 B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

21/10/24

Environmental Scientist

Authorized Signatory

21/10/24

Assistant Director (Lab),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 802 /TNPCB/AEL – SLM/2024– 25, Dated: 06.12.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamil Nadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	26.11.2024 at 04:05 PM and 04:10 PM
3.	Date and time of receipt at Lab.	27.11.2024 at 12:10 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	27.11.2024 - 06.12.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240214	2375	Clarifier Outlet	-
DEEDMP-240215	2376	Outlet in greenbelt	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240214/ 2375	DEEDMP-240215/ 2376	
1.	pH at 25°C	Number	**7.70**	**7.60**	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	**48**	**28**	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	**2168**	**2088**	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	**450**	**550**	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	**14**	**10**	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	**24**	**20**	IS 3025 (Part-44)
7.	COD	mg/l	**196**	**152**	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	**1.12**	**1.12**	APHA 23rd Edn. 2017 (4500 -NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	**4.48**	**2.80**	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	**38.108**	**3.568**	APHA 23rd Edn. 2017 (4500 NO_3-B)

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240214/ 2375	DEEDMP-240215/ 2376	
11	Total Hardness as $CaCO_3$	mg/l	610	600	APHA 23rd Edn. 2017 (2340 C)
12	Calcium as Ca	mg/l	128	136	APHA 23rd Edn.2017 (3500 Ca B)
13	Magnesium as Mg	mg/l	70	63	APHA 23rd Edn. 2017 (3500 Mg)
14	Alkalinity as $CaCO_3$	mg/l	132	44	APHA 23rd Edn. 2017 (2320 B)
15	Cyanide as CN	mg/l	<0.008	<0.008	APHA 23rd Edn.2017 (4500-CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

06/12/24

Environmental scientist

Authorized Signatory

06/12/24

Assistant Director (Lab),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 802 /TNPCB/AEL/SLM/2024– 25, Dated: 06.12.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	26.11.2024 at 04:15 PM and 04:33 PM
3.	Date and time of receipt at Lab.	27.11.2024 at 12:10 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	27.11.2024 - 06.12.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240216	2377	Piezometric Well - 1 (Lat : 11.897428, Long : 78.377275)	-
DEEDMP-240217	2378	Piezometric Well - 2 (Lat : 11.898611, Long : 78.378193)	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240216/ 2377	DEEDMP-240217/ 2378	
1	Colour	Hazen	<5	<5	APHA 23rd Edn 2017 (2130 B)
2	Turbidity	NTU	1.20	1.24	APHA 23rd Edn 2017 (2120 B)
3	pH at 25°C	Number	7.82	8.18	APHA 23rd Edn 2017 (4500 H+)
4	TSS at 103°C – 105°C	mg/l	12	12	APHA 23rd Edn.2017 (2540 D)
5	Total Dissolved Solids at 180°C	mg/l	1160	1044	APHA 23rd Edn.2017 (2540 C)
6	Chloride as Cl	mg/l	395	345	APHA 23rd Edn.2017 (4500 Cl B)
7	Sulphates as SO_4	mg/l	48	51	APHA 23rd Edn.2017 (4500 SO4-E)
8	COD	mg/l	72	64	APHA 23rd Edn 2017 (5220 B)
9	Phenolic Compounds	mg/l	<0.01	<0.01	APHA 23rd Edn. 2017 (5530 C)
10	Nitrate Nitrogen NO_3	mg/l	7.005	5.351	APHA 23rd Edn.(4500 - NO_3-B)
11	Total Hardness as $CaCO_3$	mg/l	530	550	APHA 23rd Edn.2017 (2340 C)
12	Calcium as Ca	mg/l	108	108	APHA 23rd Edn.2017 (3500 Ca B)

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240216/ 2377	DEEDMP-240217/ 2378	
13	Magnesium as Mg	mg/l	63	68	APHA 23rd Edn. 2017 (3500 Mg)
14	Fluoride as F	mg/l	0.300	0.161	APHA 23rd Edn. 2017 (4500 F-D)
15	Alkalinity as $CaCO_3$	mg/l	80	64	APHA 23rd Edn. 2017 (2320 B)
16	Iron Total as Fe	mg/l	<0.05	<0.05	APHA 23rd Edn. 2017 (3500 Fe B)
17	Total Residual Chlorine	mg/l	<1.0	<1.0	APHA 23rd Edi.2017 4500 Cl B
18	Copper	mg/l	<0.03	<0.03	APHA 23rd Edn. 2017 (3111-B)
19	Zinc	mg/l	<0.01	<0.01	APHA 23rd Edn. 2017 (3111-B)

Note: < = Indicates Less than Minimum Detectable Limit.
*** Not Performed.

Checked by
06/12/24
Environmental scientist

Authorized Signatory
S.d
06/12/2024
Assistant Director (Lab),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 802 /TNPCB/AEL/SLM/2024– 25, Dated: 06.12.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	26.11.2024 at 04:25 PM
3.	Date and time of receipt at Lab.	27.11.2024 at 12:10 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade effluent Samples.
6.	Date of Analysis	27.11.2024 - 06.12.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240218	2379	Piezometric Well - 3 (Lat : 11.899602, Long : 78.377812)	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code No. DEEDMP-240218/ 2379	Test Method
1	Colour	Hazen	<5.0	APHA 23rd Edn 2017 (2130 B)
2	Turbidity	NTU	<1.0	APHA 23rd Edn 2017 (2120 B)
3	pH at 25°C	Number	7.72	APHA 23rd Edn 2017 (4500 H+)
4	TSS at 103°C – 105°C	mg/l	8	APHA 23rd Edn.2017 (2540 D)
5	Total Dissolved Solids at 180°C	mg/l	1236	APHA 23rd Edn.2017 (2540 C)
6	Chloride as Cl	mg/l	450	APHA 23rd Edn.2017 (4500 Cl B)
7	Sulphates as SO_4	mg/l	45	APHA 23rd Edn.2017 (4500 SO4-E)
8	COD	mg/l	56	APHA 23rd Edn 2017 (5220 B)
9	Ph.Compounds	mg/l	<0.01	APHA 23rd Edn.2017 (5530 C)
10	Nitrate Nitrogen NO_3	mg/l	3.924	APHA 23rd Edn.(4500 - NO_3-B)
11	Total Hardness as $CaCO_3$	mg/l	540	APHA 23rd Edn.2017 (2340 C)
12	Calcium as Ca	mg/l	124	APHA 23rd Edn.2017 (3500 Ca B)

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Sl. No	Parameters	Unit	Test sample code No. DEEDMP-240218/ 2379	Test Method
13	Magnesium as Mg	mg/l	56	APHA 23rd Edn. 2017 (3500 Mg)
14	Fluoride as F	mg/l	0.483	APHA 23rd Edn. 2017 (4500 F-D)
15	Alkalinity as $CaCO_3$	mg/l	72	APHA 23rd Edn. 2017 (2320 B)
16	Iron Total as Fe	mg/l	<0.05	APHA 23rd Edn. 2017 (3500 Fe B)
17	Total Residual Chlorine	mg/l	<1.0	APHA 23rd Edn. 2017 (4500- Cl B)
18	Copper	mg/l	<0.03	APHA 23rd Edn. 2017 (3111-B)
19	Zinc	mg/l	<0.01	APHA 23rd Edn. 2017 (3111-B)

Note: < = Indicates Less than Minimum Detectable Limit.
*** Not Performed.

Checked by

06/12/24

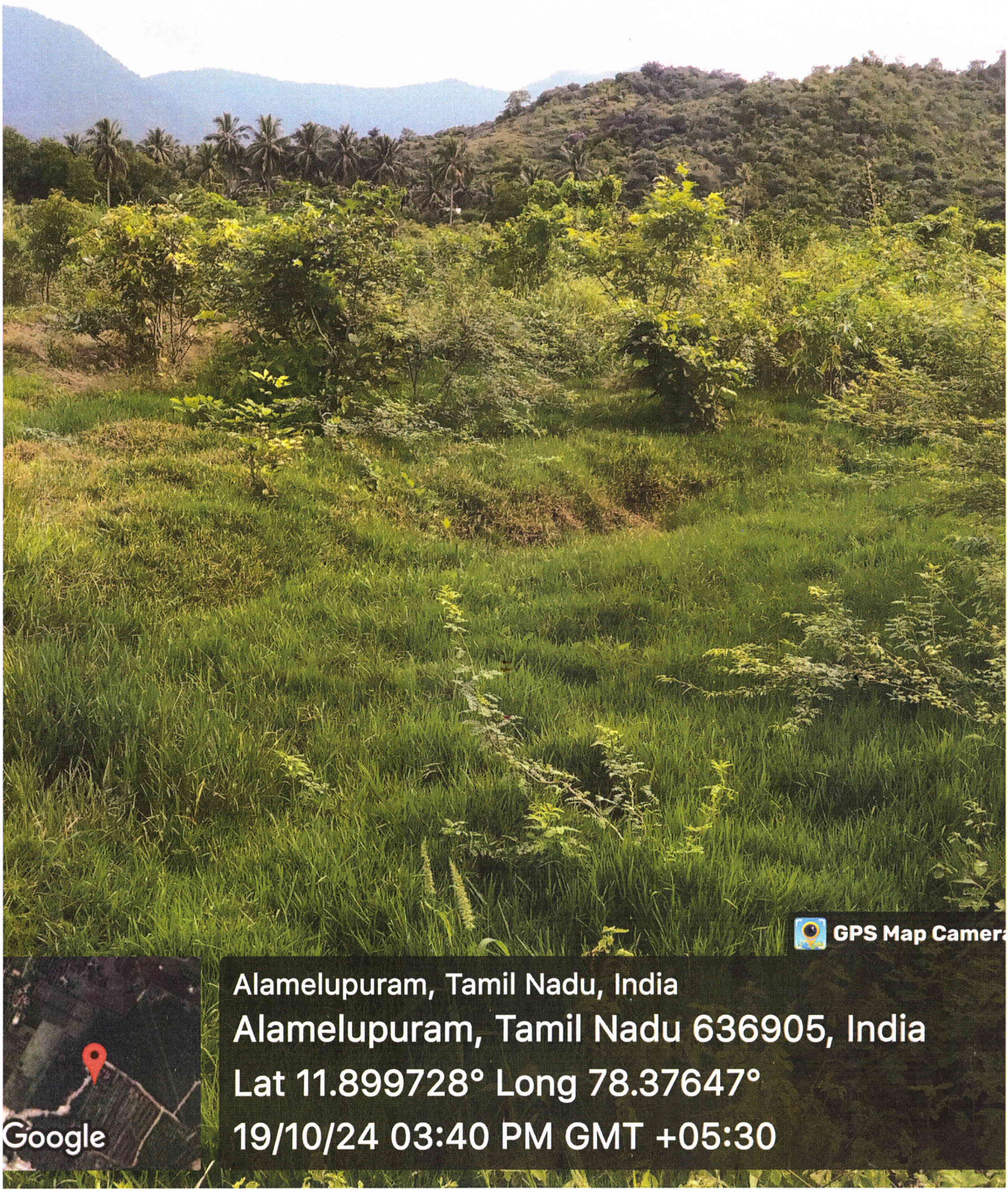
Environmental scientist

Authorized Signatory

06/12/24

Assistant Director (Lab),
AEL, TNPCB, Salem.

- End of Test Report –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GPS Map Camera
Google
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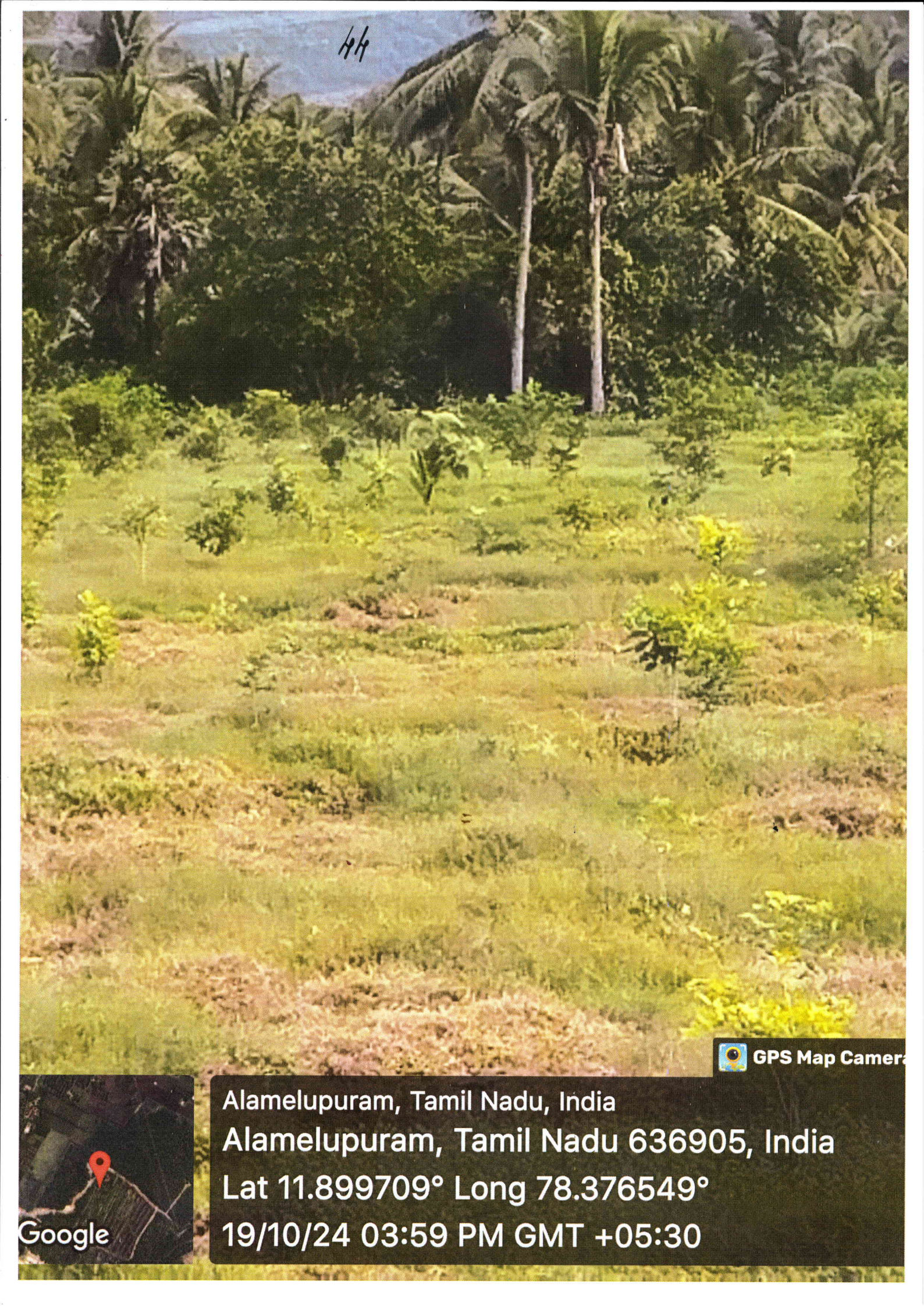
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Annexure-7

48

Annexure- 8

49

The process flow diagram for the manufacture of Tapioca Starch and Tapioca Sago

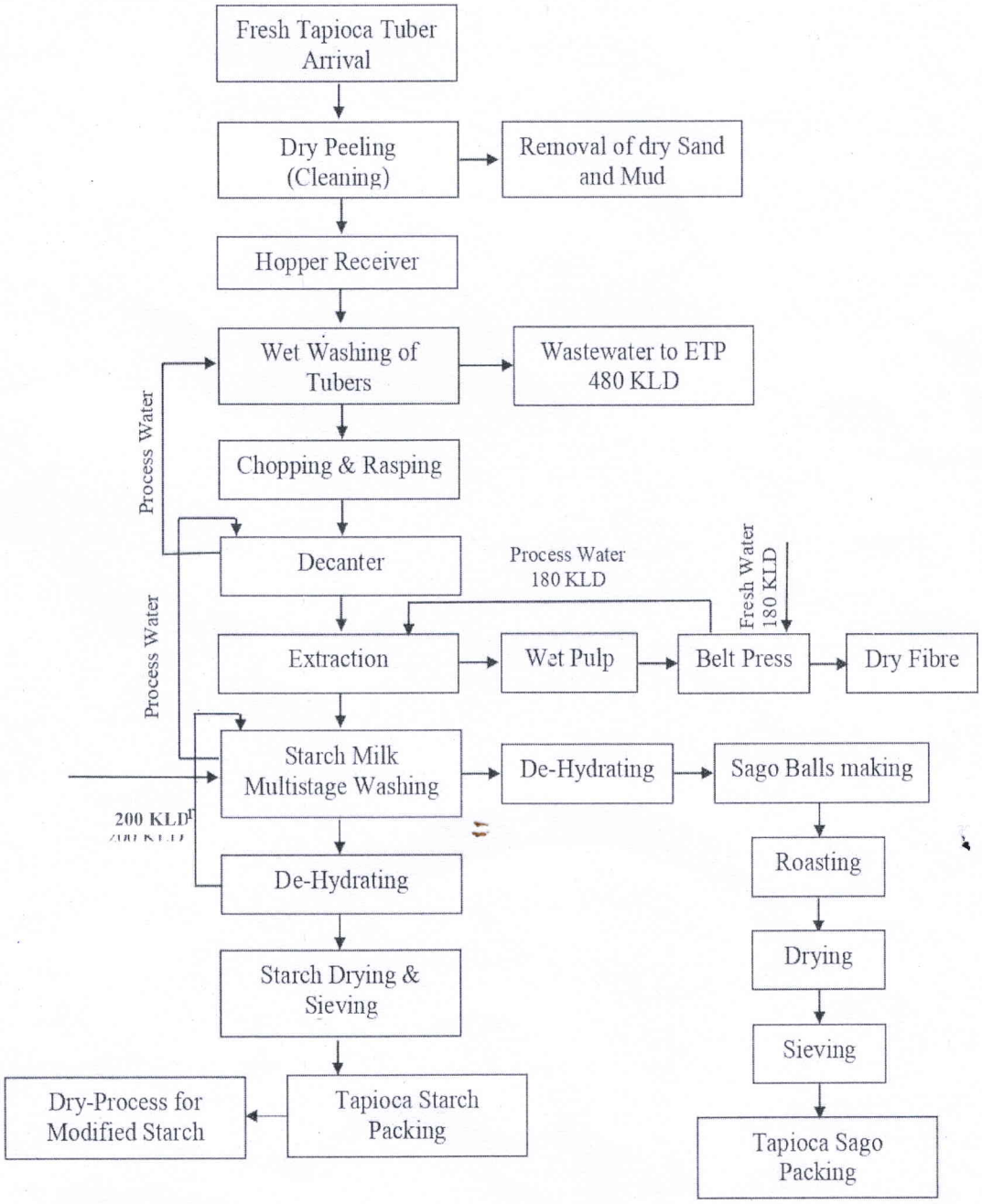

Figure 2 Manufacturing Process Flow Diagram of Tapioca starch and sago

The Process flow diagram for the manufacture of Maize Starch

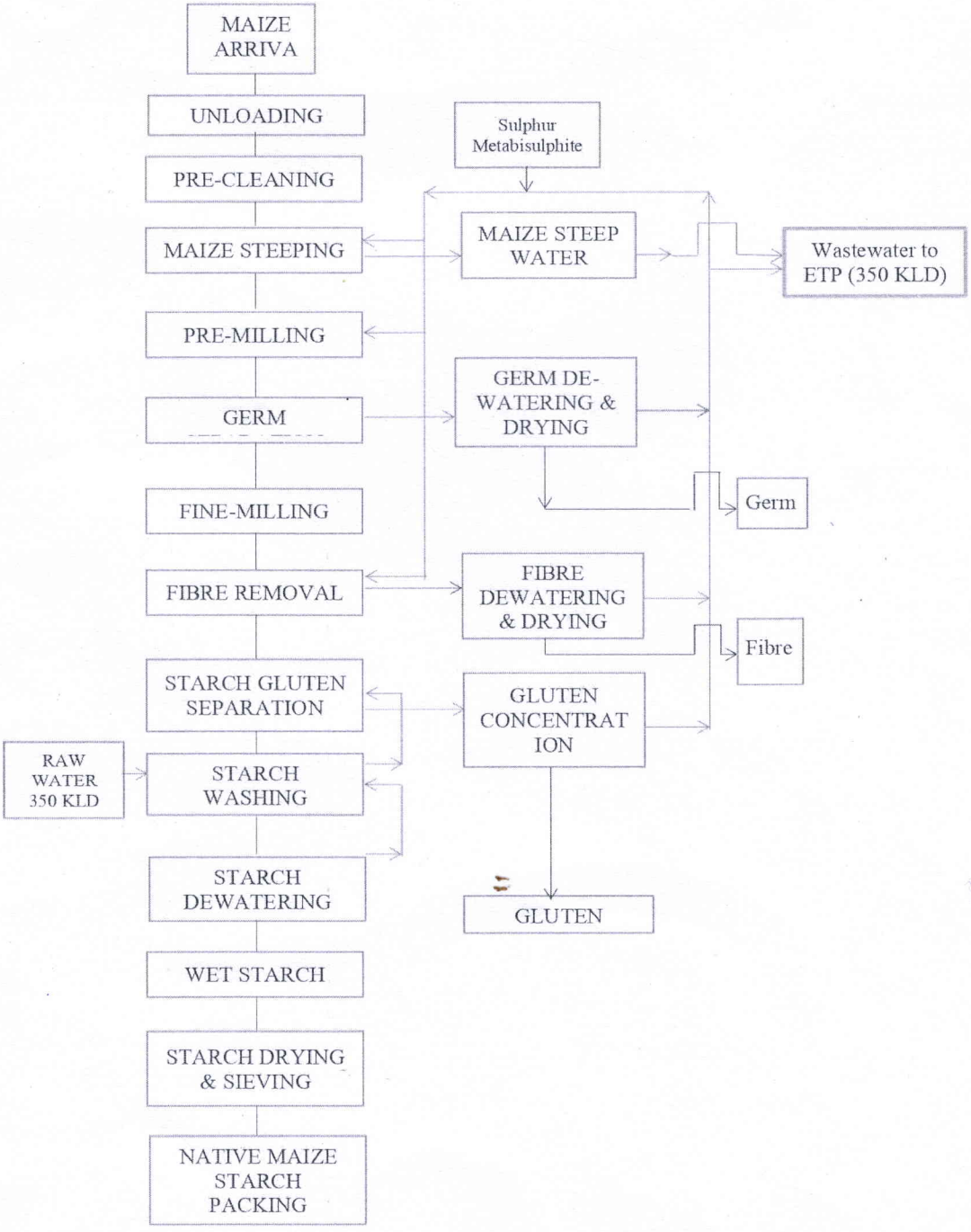

Figure 4 Manufacturing Process Flow Diagram of Maize starch

Annexure - 9

Table 4 Continued

S.No	Parameters	Unit	8 Surface Aeration Tank Outlet	9 Primary settling Tank Outlet	10 Clarifier Outlet	11 Treated Water for Irrigation	12 Pond Water	13 Ground water	14 Sludge dewatering outlet
1	pH		8.5	8	8.6	8.4	8.6	7.6	8.2
2	EC	µS/cm	2620	1630	1050	988	427	190	2700
3	TS	mg/L	4750	3200	1850	1650	600	150	4750
4	TDS	mg/L	4400	2750	1650	1300	750	200	5450
5	TSS	mg/L	1600	250	0	100	0	0	1150
6	BOD	mg/L	240	160	30	54	48	9	180
7	COD	mg/L	818	593	95	172	0	4	981
8	Color (436 nm)	m^{-1}	2.41	2.31	2.21	2.89	0	2.33	2.33
9	Color (526 nm)	m^{-1}	3.06	3.08	3.14	3.08	0	3.18	3.11
10	Color (620 nm)	m^{-1}	3.87	4.12	4.36	4.19	0	3.89	4.02
11	Total Hardness	mg/L	540	370	320	320	230	20	540
12	Calcium Hardness	mg/L	520	60	110	80	90	10	500
13	Magnesium Hardness	mg/L	20	310	210	240	140	10	40
14	Chlorides	mg/L	287	186	160	152	110	46	270
15	Sulphates	mg/L	49	5	54	28	21	3	53
16	Silica	mg/L	800	563	636	522	317	146	1935
17	MLSS	mg/L	1400	ND	ND	ND	ND	ND	ND
18	SVI	mL/g	35.7	ND	ND	ND	ND	ND	ND

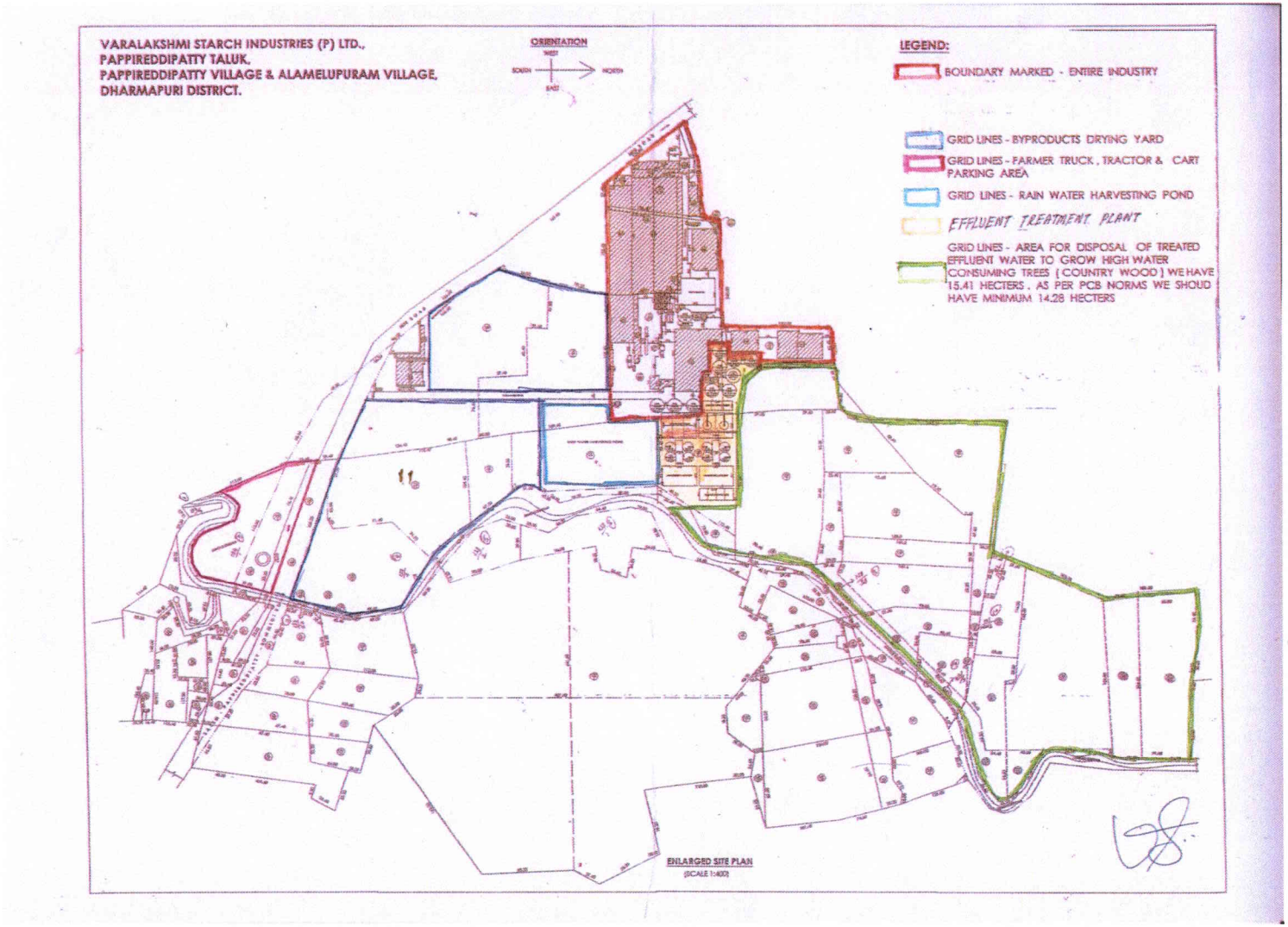

Figure 16 Green belt Area Layout

தமிழ்நாடு குடிநீர் வடிகால் வாரியம்

அனுப்புதல்
திரு.K.சேகர், B.E.,
நிர்வாகப் பொறியாளர்,
த.கு.வ.வாரியம்,
திட்டக் கோட்டம்,
கிருஷ்ணகிரி.

பெறுநர்
மாவட்ட ஆட்சித்தலைவர்,
தருமபுரி மாவட்டம்,
தருமபுரி.

க.எண்.கோ/ த.கு.வ.வா/வ.அ/தி.கோ/கி.கிரி/2022/நாள்.16.12.2022.

அய்யா

பொருள் தருமபுரி மாவட்டம்–பாப்பிரெட்டிபட்டி வட்டம், அலமேலுபுரம் மற்றும் பாப்பிரெட்டிபட்டி கிராமத்தில் செயல்பட்டு வரும் தி/ள்.வரலட்சுமி ஸ்டார்ச் இன்டஸ்டிரிஸ் தொழிற்சாலை பகுதியில்–குடிநீர் தரம் ஆய்வு செய்து அறிக்கை சமர்ப்பித்தல் தொடர்பாக.

பார்வை
1. மாவட்ட சுற்று சூழல் பொறியாளர், க.எண்.கோ.0013/மா.சு.சூ.பொ/தநாமாகவா/ தருமபுரி/2022/நாள்.18.11.2022.
2 மாவட்ட ஆட்சித்தலைவர், ந.க.எண்.0013/2022/ தநாமாகவாரியம்/ நாள்.18.11.2022.

தருமபுரி மாவட்டம், பாப்பிரெட்டிபட்டி வட்டம், அலமேலுபுரம் மற்றும் பாப்பிரெட்டிபட்டி கிராமத்தில் செயல்பட்டு வரும் M/s.. வரலட்சுமி ஸ்டார்ச் இன்டஸ்டிரிஸ் பி.லிட் தொழிற்சாலையில் 30.11.2022 அன்று மாவட்ட வருவாய் அலுவலர், தருமபுரி அவர்களின் தலைமையில் கள ஆய்வு மேற்கொள்ளப்பட்டது. இந்த ஆய்வில் குழு உறுப்பினர் நிர்வாகப் பொறியாளர், த.கு.வ.வாரியம், கிருஷ்ணகிரி அவர்களுக்கு தொழிற்சாலையின் அருகில் அமைந்துள்ள கிராமங்களில் மக்கள் பயன்படுத்தும் குடிநீரின் தரத்தை ஆய்வு செய்து அறிக்கை சமர்ப்பிக்குமாறு மாவட்ட வருவாய் அலுவலர் அவர்களால் அறிவுறுத்தப்பட்டது.

மேலும் மாவட்ட வருவாய் அலுவலர் முன்னிலையில், பீனி ஆறு பாதுகாப்பு விவசாயிகள் இயக்க ஒருங்கினைப்பாளர்கள் குறிப்பிட்ட 8 (எட்டு) கிராமங்களில் குடிநீர் சேகரித்து ஆய்வு செய்யும்படி, கோரிக்கை வைத்தார்கள். இதன் அடிப்படையில் 06.12.2022 அன்று கீழ்க்கண்ட கிராமங்களில் குடிநீர் மாதிரிகள் சேகரித்து தமிழ்நாடு குடிநீர் வடிகால் வாரியத்தின் மூலம் செயல்பட்டு வரும் மாவட்ட குடிநீர் பகுப்பாய்வு மையத்தில் குடிநீரின் தரம் ஆய்வு செய்யப்பட்டது, அதன் விவரம் கீழ்வருமாறு.

வ.எண்	கிராமங்களின் பெயர்கள்	குடிநீர் சேகரித்த இடங்கள்	பரிசோதனை முடிவுகள்
1	அதிகாரப்பட்டி	மையில்கல் புளியமரம் (சிறு விசை மின் பம்பு– M.P.P)	குடிநீர் பயன்பாட்டிற்க்கு உகந்ததல்ல (புளுரைடு அதிகம்)
2	அதிகாரப்பட்டி	குமரவேல் வீட்டின் அருகில் (தனி விசை மின் பம்பு– IPP)	குடிநீர் பயன்பாட்டிற்க்கு உகந்தது
3	அ. பள்ளிப்பட்டி	காவல் நிலையம் அருகில் (மேல் நிலை நீர் தேக்க தொட்டி– OHT)	குடிநீர் பயன்பாட்டிற்க்கு உகந்தது
4	கவுண்டம்பட்டி	தோழனூர் ரோடு (திறந்த வெளி கிணறு– O Well)	குடிநீர் பயன்பாட்டிற்க்கு உகந்தது
5	புதுப்பட்டி	அங்கன்வாடி மையம் அருகில் (மேல் நிலை நீர் தேக்க தொட்டி– OHT)	குடிநீர் பயன்பாட்டிற்க்கு உகந்தது
6	இருளபட்டி	காளியம்மன் கோவில் அருகில் (மேல் நிலை நீர் தேக்க தொட்டி– OHT)	குடிநீர் பயன்பாட்டிற்க்கு உகந்தது
7	அலமேலுபுரம்	தேன்மொழி வீட்டின் அருகில் (கை பம்பு– H.P)	குடிநீர் பயன்பாட்டிற்க்கு உகந்ததல்ல (கடினத்தன்மை)
8	கோட்டைமேடு	மாரியம்மன் கோவில் பின்புரம் (மேல் நிலை நீர் தேக்க தொட்டி– OHT)	குடிநீர் பயன்பாட்டிற்க்கு உகந்தது

மேற்கண்ட கிராமங்களில் மக்கள் பயன்படுத்தும் குடிநீரை சேகரித்து மாவட்ட குடிநீர் பகுப்பாய்வு மையத்தில் பரிசோதனை செய்ததின் முடிவில் வரிசை எண் (1) மற்றும் வரிசை எண் (7) ஆகிய இரண்டு மாதிரிகள் குடிநீர் பயன்பாட்டிற்க்கு பயன்படுத்த முடியாதவைகளாக உள்ளன. இந்த இரண்டு வகையான நீர் ஆதாரங்களும் குடிநீர் அல்லாத இதர பயன்பாட்டிற்க்கு பயன்படுத்தப்பட்டு வருகிறது. தருமபுரி மாவட்டத்தில் இயற்கையாகவே புளுரைடு கனிமம் அதிகம் உள்ள பாறை அமைப்புகள் உள்ளன, இதனால் நிலத்தடி நீர் ஆதாரங்களிலும் புளுரைடு கனிமம் அதிகமான அளவில் உள்ளது. மேலும் மேற்குறிப்பிட்ட அனைத்து கிராமங்களுக்கும் குடிநீர் பயன்பாட்டிற்கு ஒகேனக்கல் கூட்டுக் குடிநீர் திட்டத்தின் மூலம் குடிநீர் வழங்கப்பட்டு வருகிறது என்பதை தெரிவித்துக்கொள்கிறேன்.

இணைப்பு – 1. குடிநீர் பரிசோதனை மாதிரிகளின்முடிவுகள்

நிர்வாகப் பொறியாளர், த.கு.வ.வாரியம்,
திட்டக் கோட்டம், கிருஷ்ணகிரி.

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TEST WATER BEFORE TASTE

TAMILNADU WATER SUPPLY AND DRAINAGE BOARD

District Level Water Testing Labortaory

TWAD Board, IB Campus, Collectorate - Post, Oddapatty, Dharmapuri - 636 705.

TEST REPORT Ph : 04342 - 231533

TO:
The Executive Engineer,
TWAD BOARD Project Division,
Krishnagiri.

Lr.No.F.1-4 /AEE/LAB/DPI/2022/Dt.8.12.2022

Sir,

Sub : Examination of water sample - Report furnished - reg.
Lr.No/2022/ E2 dt.6.12.2022

The result of analysis for the water samples sent under reference is enclosed.

Block : Pappireddipatty Starch Industry. Date of Collection: 6.12.2022
Date of Receipt: 6.12.2022

Habitation :1 Athikarapatti@Location :Mayilkal puliyamaram, MPP, Lattitude: 11.55.51, Longitude: 78.23.27
Habitation :2 Athikarapatti@Location;Near Kumaravel house IPP, Lattitude:11.56.4441,Longitude:78.2334.177
Habitation :3 A.Pallipatti@ Location;Near police station, IPP ,Lattitude:11.56.20.926,Longitude:78.24.17.149
Habitation : 4 Goundampatti@Location; Thozhanoor Road, OW,Lattitude:11.57.21.968,Longitude:78.24.23.919

BIS 10500:2012	Aceptable Limit	Maximum Permissible	Result			
I.PHYSICAL EXAMINATIONS			1	2	3	4
1. Appearance			Clear	Clear	Clear	Clear
2. Colour (pt.co.scale)	5	15	Colourless	Colourless	Colourless	Colourless
3. Odour	Agreeable	Agreeable	None	None	None	None
4. Turbidity NTU	1	5	0.2	0.3	0.2	0.2
5. Total dissolved solids Mg/L	500	2000	844	719	354	788
6. Electrical coductivity micro mho/cm	-	-	1206	1027	506	1126
II.CHEMICAL EXAMINATIONS						
7. pH	6.5-8.5	6.5-8.5	7.26	7.25	7.62	7.24
8. Alkalinity Ph as $CaCO_{3mg/L}$	-	-	0	0	0	0
9. Alkalinity Total as $CaCO_{3\ mg/L}$	200	600	472	264	168	356
10. Total Hardness as $CaCO_{3\ mg/L}$	200	600	356	344	170	328
11. Calcium as $Ca_{\ mg/L}$	75	200	24	12	10	26
12. Magnesium as $_{Mg/L}$	30	100	12	10	9	12
13. Iron Total as $Fe_{\ mg/L}$	0.3	1.0	0.00	0.00	0.00	0.00
14. Manganese as $Mn_{\ mg/L}$	0.1	0.3	0.00	0.00	0.00	0.00
15. Free Ammonia as $NH_{3\ mg/L}$	0.5	0.5	0.00	0.00	0.00	0.00
16. Nitrite as $NO_{2\ mg/L}$	-	-	0.00	0.00	0.00	0.00
17. Nitrate as $NO_{3\ mg/L}$	45	45	25	19	9	31
18. Chloride as $Cl_{\ mg/L}$	250	1000	90	150	60	120
19 .Fluoride as $F_{\ mg/L}$	1.0	1.5	2.5	1.0	1.2	0.6
20. Sulphate as $SO_{4\ mg/L}$	200	400	32	54	17	50
21. Phosphate as $PO_{4\ mg/L}$	-	-	0.00	0.00	0.00	0.00
22 .R.C	0.2	1	0.0	0.0	0.0	0.0
23 .Fecal Coliform(100Ml)	0	0	0	0	0	0

Report;2,3,4:The water sample is chemically potable.
Report;1:The water sample is Chemically Nonpotable.F

16.12.2022

Assistant Executive Engineer,
TWAD Board,
RWS sub division,
Dharmapuri.

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TEST WATER BEFORE TASTE

TAMILNADU WATER SUPPLY AND DRAINAGE BOARD

District Level Water Testing Labortaory

TWAD Board, IB Campus, Collectorate - Post, Oddapatty, Dharmapuri - 636 705.

TEST REPORT **Ph : 04342 - 231533**

TO:
The Executive Engineer,
TWAD BOARD Project Division,
Krishnagiri.

Lr.No.F.1-4 /AEE/LAB/DPI/2022/Dt. 8.12.2022

Sir,

Sub : Examination of water sample - Report furnished - reg.
Lr.No/2022/ E2 dt.6.12.2022

The result of analysis for the water samples sent under reference is enclosed.

Block : Pappireddipatty Starch Industry

Date of Collection: 6.12.2022
Date of Receipt: 6.12.2022

Habitation :5 H.Pudhupatti@Location :Near Anganwadi Centre ,IPP Lattitude: 11.57.43.951, Longitude: 78.25.02.451
Habitation :6 Irulapatti@Location:Near Kaliyamman kovil IPP, Lattitude:11.56.41.249,Longitude:78.24.29.815
Habitation :7 Alamelpuram@ Location: Near Thenmozhi house HP,Lattitude:11.90.90.66,Longitude:78.38.819
Habitation : 8 Kottaimedu@Location: Mariyamman kovil back side IPP,Lattitude:11.911.644,Longitude:78.38.364

BIS 10500:2012	Aceptable Limit	Maximum Permissible	Result			
I.PHYSICAL EXAMINATIONS			5	6	7	8
1. Appearance			Clear	Clear	Clear	Clear
2. Colour (pt.co.scale)	5	15	Colourless	Colourless	Colourless	Colourless
3. Odour	Agreeable	Agreeable	None	None	None	None
4. Turbidity NTU	1	5	0.3	0.3	0.3	0.2
5. Total dissolved solids Mg/L	500	2000	356	1400	1401	456
6. Electrical coductivity micro mho/cm	-	-	509	2000	2001	651
II.CHEMICAL EXAMINATIONS						
7. pH	6.5-8.5	6.5-8.5	7.62	7.24	7.35	7.62
8. Alkalinity Ph as $CaCO_{3mg/L}$	-	-	0	0	0	0
9. Alkalinity Total as $CaCO_{3\ mg/L}$	200	600	168	356	424	212
10. Total Hardness as $CaCO_{3\ mg/L}$	200	600	228	540	690	236
11. Calcium as $Ca_{\ mg/L}$	75	200	23	22	22	16
12. Magnesium as $_{Mg/L}$	30	100	12	13	12	9
13. Iron Total as $Fe_{\ mg/L}$	0.3	1.0	0.00	0.00	0.00	0.00
14. Manganese as $Mn_{\ mg/L}$	0.1	0.3	0.00	0.00	0.00	0.00
15. Free Ammonia as $NH_{3\ mg/L}$	0.5	0.5	0.00	0.00	0.00	0.00
16. Nitrite as $NO_{2\ mg/L}$	-	-	0.00	0.00	0.00	0.00
17. Nitrate as $NO_{3\ mg/L}$	45	45	8	33	25	11
18. Chloride as $Cl_{\ mg/L}$	250	1000	40	340	360	40
19 .Fluoride as $F_{\ mg/L}$	1.0	1.5	0.6	1.2	1.4	0.6
20. Sulphate as $SO_{4\ mg/L}$	200	400	57	87	41	14
21. Phosphate as $PO_{4\ mg/L}$	-	-	0.00	0.00	0.00	0.00
22 .R.C	0.2	1	0.0	0.0	0.0	0.0
23 .Fecal Coliform(100Ml)	0	0	0	0	0	0

Report;5,6,8: The water sample is chemically potable.
Report;7: The water sample is Chemically Nonpotable.TH.

Assistant Executive Engineer,
TWAD Board,
RWS sub division,
Dharmapuri.

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Annexure - 10

VARALAKSHMI STARCH INDUSTRIES PRIVATE LIMITED,
PAPPIREDDIPATTI, DHARMAPURI.

CONSOLIDATED REPORT OF ANALYSIS OF TREATED EFFLUENT SAMPLE COLLECTED BY DEE/ AEE, TNPCB DHARMAPURI FROM ETP AND ANALYZED IN TNPCB LAB, SALEM.

REPORTED VALUES OF TREATED WASTE WATER SAMPLES DRAWN FROM 2021 to 2022

	ROA No. and Date				ROA NO. 560/ AEL-SLM / 2020-2021 Dt 30.03.2021	ROA NO. 492/ AEL-SLM / 2021-2022 Dt 23.11.2021	ROA NO. 553/ AEL-SLM / 2021-2022 Dt 30.12.2021	ROA NO. 564/ AEL-SLM / 2021-2022 Dt 30.12.2021	ROA NO. 664/ AEL-SLM/2021-22 Dt 09.02.2022	ROA NO. 730/ AEL-SLM/2021-22 Dt 18.03.2022	ROA NO. 768 / AEL-SLM / 2021-22 Dt 30.03.2022	ROA NO. 67 / AEL-SLM / 2022-23 Dt 24.05.2022	ROA NO.173 / AEL-SLM / 2022-23 Dt 06.07.2022	ROA NO. 300 / TNPCB/ AEL-SLM / 2022-23 Dt 30.08.2022	ROA NO. 411 / TNPCB/ AEL-SLM / 2022-23 Dt 30.09.2022	ROA NO.December-2016-December-2018/2022-2023 Dt 02.01.2023
	SAMPLE COLLECTION DEE/ AEE DATE				11.03.2021	13.11.2021	09.12.2021	15.12.2021	28.01.22	25.02.22	16.03.22	09.05.22	22.06.22	04.08.22	20.09.22	27.12.2022
	TNPCB LAB ROA DATE				12.04.2021	07.12.2021	30.12.2021	06.01.2022	11.02.22	09.05.22	27.04.22	24.05.22	08.08.22	09.09.22	21.10.22	03.01.2023
S.No	Parameters	Units	in Consent Orders*	for Own land Irrigation**	DEE CODE No. SSR/04/11.03 LAB CODE 2379	DEE CODE No. SSR/08/13.11 LAB CODE 1714	DEE CODE No. SSR/03/09.12 LAB CODE 1954	DEE CODE No. DEE/04/15.12 LAB CODE 2012	DEE Code SSR/13/ 28.01 LAB CODE 2300	DEE Code SSR/08/ 25.02 LAB CODE 2498	DEE Code SSR/05/ 16.03 LAB CODE 2630	DEE Code SSR/08/ 09-05 LAB CODE 241	DEE Code BLA/03/ 22-06 LAB CODE 556	DEE Code SSR/04/ 04-08 LAB CODE 1030	DEE CODE BLA/19/ 20-09 LAB CODE 1506	DMP-06 Dec -2018
					ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET
1	pH at 25°C	Number	5.5 -9	**5.5 - 9.0**	7.38	7.18	7.24	7.36	6.65	6.23	6.24	6.48	7.24	7.80	7.64	7.60
2	Total Suspended Solids at 103°C - at 105°C	mg/l	100	**200**	220	156	148	884	124	144	264	196	124	32	24	564
3	Total Dissolved Solids at 180°C	mg/l	2100	**2100**	2944	1072	1032	2332	916	724	916	1192	824	1672	664	_
4	Fixed Dissolved Solids@550 °C	mg/l														3016
5	Chloride as Cl	mg/l	1000	**600**	130	120	75	220	75	64	105	165	173	290	150	350
6	Sulphate as SO4	mg/l	1000	**1000**	31	28	7	15	<5	29	7	22	23	32	<5	
7	Oil & Grease	mg/l	10	**10**		<4	4	5	4	4	4	<4	4.8	<4	<3	
8	BOD (at 27°C for 3 days)	mg/l	30	**100**	75	66	102	180	115	114	144	70	115	30	8.7	352
9	COD	mg/l	250	-	592	368	496	752	504	440	600	256	496	224	72	824
10	Cyanide	mg/l	0.2	**0.2**		<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
11	Total Kjeldahl Nitrogen	mg/l											21.28	3.36	2.24	350.56
12	Amonickal Nitrogen as NH3-N	mg/l														
13	Total Hardness as CaCo3	mg/l														
14	Calcium as Ca	mg/l														
15	Magnesium as Mg	mg/l														
16	% Sodium	%														24
17	Alkalinity as CaCO3	mg/l														
18	Nitrate Nitrogen as NO3	mg/l														
19	SAR	mg/l														

ADVANCED ENVIRONMENTAL LABORATORY, TAMILNADU POLLUTION CONTROL BOARD, SALEM 636 004.

Accredited by NABL – (ISO/IEC 17025:2005)

ULR-TC-68742100000488 F
ULR-TC-68742100000489 F

ROA NO.560/ROA/AEL – SLM/2020 – 2021 Dt.30.03.2021

1.	Name and address of the sender	The District Environmental Engineer
		Tamilnadu Pollution Control Board
		Dharmapuri
2.	Date and time of collection	11.03.2021 at 01.15 PM to 01.30 PM
3.	Date and time of receipt at Lab.	12.03.2021 at 10.10 AM
4.	Condition of seal, fastening and Container	sealed/fastened Condition in Polythene carbuoy 2.5 lits X 2 Nos
5.	Nature and Number of samples	2 Nos of Trade effluent samples

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/04/11.03	2379	ETP Outlet	-
SSR/05/11.03	2380	ETP Inlet	-

TEST REPORT

Sl. No.	Parameters	Unit	Test Sample Code Nos.		Test Method
			2379/ SSR/04/ 11.03	2380/ SSR/05/ 11.03	
01.	pH at 25°C	Number	7.38	4.03	APHA 23rd Edi.2017 4500 – H
02.	TSS at 103°C – at 105°C	mg/l	220	392	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	2944	4128	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	130	250	APHA 23rd Edi.2017 4500-ClB
05.	Sulphates as SO_4	mg/l	31	211	APHA 23rd Edi.2017 4500 E
06.	BOD (at 27°C for 3 days)	mg/l	75	2500	IS3025 (P44) 1993 Reaffirmed 2009
07.	COD	mg/l	592	19840	APHA 23rd Edi.2017 5220

Note: -End of Test Report -

Checked by

12/4/21

Dy. Chief Scientific Officer
Technical Manager.

Authorized signatory

Assistant Director (Lab).

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

Accredited by NABL – (ISO/IEC 17025:2017)

ULR-TC98992100000337 F

ROA NO. 492 /AEL – SLM/2021 – 2022 Dt.23.11.2021

1.	Name and address of the sender	The District Environmental Engineer
		Tamilnadu Pollution Control Board
		Dharmapuri
2.	Date and time of collection	13.11.2021 at 04.00 PM
3.	Date and time of receipt at Lab.	13.11.2021 at 07.50 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/08/13.11	1714	ETP Outlet	--

TEST REPORT

Sl. No.	Parameters	Unit	Test Sample Code No. 1714/ SSR/08/13.11	Test Method
01.	pH at 25°C	Number	7.18	APHA 23rd Edi.2017 4500 – H
02.	TSS at 103°C – at 105°C	mg/l	156	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	1072	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	120	APHA 23rd Edi.2017 4500-Cl B
05.	Sulphates as SO_4	mg/l	28	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	<4	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	66	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	368	APHA 23rd Edi.2017 5220
09.	Cyanide	mg/l	<0.05	APHA 23rd Edi.2017 4500-CN E

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report -

Checked by

Dy. Chief Scientific Officer
Technical Manager.

Authorized signatory

Assistant Director (Lab)
Quality Manager.

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ULR-TC98992100000580 F

Accredited by NABL – (ISO/IEC 17025:2017)

ROA NO.553 /AEL – SLM/2021 – 2022 Dt.30.12.2021

1.	Name and address of the sender	The District Environmental Engineer
		Tamilnadu Pollution Control Board
		Dharmapuri.
2.	Date and time of collection	09.12.2021 at 12.05 pm
3.	Date and time of receipt at Lab.	10.12.2021 at 10.55 am
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/03/09.12	1954	ETP Outlet	-

TEST REPORT

Sl. No.	Parameters	Unit	Test Sample Code No. 1954/ SSR/03/09.12	Test Method
01.	pH at 25°C	Number	7.24	APHA 23rd Edi.2017 4500 – H
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	148	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	1032	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	75	APHA 23rd Edi.2017 4500-ClB
05.	Sulphates as SO_4	mg/l	7	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	4	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	102	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	496	APHA 23rd Edi.2017 5220
09.	Cyanide	mg/l	<0.05	APHA 23rd Edi.2017 4500-CNE

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report –

Checked by

30/12/21

Dy. Chief Scientific Officer
Technical Manager.

Authorized signatory

31/12/21

Assistant Director (Lab)
Quality Manager.

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ULR-TC98992100000643 F

Accredited by NABL – (ISO/IEC 17025:2017)

ROA NO.564/AEL – SLM/2021 – 2022 Dt.30.12.2021

1.	Name and address of the sender	The District Environmental Engineer
		Tamilnadu Pollution Control Board
		Dharmapuri.
2.	Date and time of collection	15.12.2021 at 03.00 PM
3.	Date and time of receipt at Lab.	16.12.2021 at 01.00 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 Nos. of Trade Effluent Sample.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEE/04/15.12	2012	ETP Outlet	-

REPORT

Sl. No.	Parameters	Unit	Test Sample Code No. 2012/ DEE/04/15.12	Test Method
01.	pH at 25°C	Number	7.36	APHA 23rd Edi.2017 4500 – H
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	884	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	2332	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	220	APHA 23rd Edi.2017 4500-ClB
05.	Sulphates as SO_4	mg/l	15	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	5	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	180	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	752	APHA 23rd Edi.2017 5220
09.	Cyanide	mg/l	<0.05	APHA 23rd Edi.2017 4500-CN E

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report –

Checked by
Dy. Chief Scientific Officer
Technical Manager.

Verified by
6/1/22
Chief Scientific Officer
Dy. Quality Manager.

Approved by
6/1/22
Assistant Director (Lab)
Quality Manager.

61

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ULR-TC98992100000887 F

Accredited by NABL – (ISO/IEC 17025:2017)

ROA NO. 664 /AEL – SLM/2021– 22 Dt. 09.02.2022

1.	Name and address of the sender	The District Environmental Engineer Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	28.01.2022 at 03.45 pm
3.	Date and time of receipt at Lab.	29.01.2022 at 10.10 am
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/13/28-01	2300	ETP Outlet	--

Parameter to be Analysed:

Sl. No.	Parameters	Unit	Test Sample Code No.	Method
			2300/ SSR/13/28-01	
01.	p^H at 25°C	Number	6.65	APHA 23rd Edi.2017 4500 – H
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	124	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	916	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	75	APHA 23rd Edi.2017 4500-ClˉB
05.	Sulphates as SO_4	mg/l	<5	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	4	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	115	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	504	APHA 23rd Edi.2017 5220
09.	Cyanide	mg/l	<0.05	APHA 23rd Edi.2017 4500-CN-E

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report –

Checked by

N.V. 11/2/22

Chief Scientific Officer
Dy. Quality Manager.

Authorized Signatory

D. Mohanaraj 11/2/22

Assistant Director (Lab).
Quality Manager.

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ULR-TC98992100001009 F

Accredited by NABL – (ISO/IEC 17025:2017)

ROA NO. 730 /AEL – SLM/2021– 22 Dt. 18.03.2022

1.	Name and address of the sender	The District Environmental Engineer Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	25.02.2022 at 03.40 PM
3.	Date and time of receipt at Lab.	26.02.2022 at 09.00 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/08/25-02	2498	ETP Outlet	--

Parameter to be Analysed:

Sl. No.	Parameters	Unit	Test Sample Code No.	Method
			2498/ SSR/08/25-02	
01.	p^H at 25°C	Number	6.23	APHA 23rd Edi.2017 4500 – H
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	144	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	724	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	64	APHA 23rd Edi.2017 4500-Cl B
05.	Sulphates as SO_4	mg/l	29	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	4	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	114	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	440	APHA 23rd Edi.2017 5220
09.	Cyanide	mg/l	<0.05	APHA 23rd Edi.2017 4500-CN-E

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report --

Checked by

N. Vedim 6/5/22

Chief Scientific Officer
Dy. Quality Manager.

Authorized Signatory

D. Mahendran 9/5/22

Assistant Director (Lab).
Quality Manager.

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

Accredited by NABL – (ISO/IEC 17025:2017)

ULR-TC98992100001140 F

ROA NO.768 /AEL – SLM/2021 – 22 Dt.30.03.2022

1.	Name and address of the sender	The District Environmental Engineer
		Tamilnadu Pollution Control Board
		Dharmapuri.
2.	Date and time of collection	16.03.2022 at 01.40 PM
3.	Date and time of receipt at Lab.	17.03.2022 at 11.00 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/05/16.03	2630	ETP Outlet	–

TEST REPORT

Sl. No.	Parameters	Unit	Test Sample Code No.	Test Method
			2630/ SSR/05/16.03	
01.	pH at 25°C	Number	6.24	APHA 23rd Edi.2017 4500 – H
02.	Total suspended solids at 103°C – at 105°C	mg/l	264	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	916	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	105	APHA 23rd Edi.2017 4500-Cl⁻B
05.	Sulphates as SO_4	mg/l	7	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	4	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	144	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	600	APHA 23rd Edi.2017 5220

- End of Test Report-

Checked by

N. Vendiraj 27/4/22

Dy. Chief Scientific Officer
Technical Manager.

Authorized signatory

D. Mohanambal 27/4/22

Assistant Director (Lab).
Quality Manager

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

Accredited by NABL – (ISO/IEC 17025:2017)

ULR-TC98992200000244 F
ULR-TC98992200000245 F

ROA NO. 67 /AEL – SLM/2022– 23 Dt. 24.05.2022

1.	Name and address of the sender	The District Environmental Engineer Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	09.05.2022 at 01.20 PM – 01.30 PM
3.	Date and time of receipt at Lab.	10.05.2022 at 10.10 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade Effluent Samples.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/07/09-05	240	ETP Inlet	--
SSR/08/09-05	241	ETP Outlet	--

Parameter to be Analysed:

Sl. No.	Parameters	Unit	Test Sample Code No.		Method
			240/ SSR/07/09-05	241/ SSR/08/09-05	
01.	p^H at 25°C	Number	3.76	6.48	APHA 23rd Edi.2017 4500 – H
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	2860	196	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	18576	1192	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	7498	165	APHA 23rd Edi.2017 4500-ClB
05.	Sulphates as SO_4	mg/l	162	22	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	40	<4	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	9300	70	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	36400	256	APHA 23rd Edi.2017 5220
09.	Cyanide	mg/l	<0.05	<0.05	APHA 23rd Edi.2017 4500-CN-E

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report –

Checked by

N. Vadivu 24/5/22

Dy. Chief Scientific Officer
Technical Manager.

Authorized Signatory

D. Mohanambigai 24/5/22

Assistant Director (Lab).
Quality Manager.

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ULR-TC98992200000567 F

Accredited by NABL – (ISO/IEC 17025:2017)

ROA NO. 173/AEL – SLM/2022– 23 Dt. 06.07.2022

1.	Name and address of the sender	The District Environmental Engineer Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	22.06.2022 at 04.45 PM
3.	Date and time of receipt at Lab.	23.06.2022 at 04.50 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/03/22-06	556	ETP Outlet	--

Parameter to be Analysed:

Sl. No.	Parameters	Unit	Test Sample Code No. 556/ BLA/03/22-06	Method
01.	p^H at 25°C	Number	7.24	APHA 23rd Edi.2017 4500 – H
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	124	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	824	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	173	APHA 23rd Edi.2017 4500-ClB
05.	Sulphates as SO_4	mg/l	23	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	Mg/l	4.8	APHA 23rd Edi.2017 – 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	115	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	496	APHA 23rd Edi.2017 5220
09.	Total Kjeldahl Nitrogen	mg/l	21.28	APHA 23rd Edi. 2017 4500 – N_{org} B
10.	Cyanide	mg/l	<0.05	APHA 23rd Edi.2017 4500-CN-E

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report –

Checked by

N. Vadivu 8/8/22

Dy. Chief Scientific Officer
Technical Manager.

Authorized Signatory

D. Mohanraj 8/8/22

Assistant Director (Lab).
Quality Manager.

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

Accredited by NABL – (ISO/IEC 17025:2017)

ULR-TC98992200001042 F
ULR-TC98992200001043 F

ROA NO.300/TNPCB/AEL – SLM/2022– 23 Dt. 30.08.2022

1.	Name and address of the sender	The District Environmental Engineer Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	04.08.2022 at 1.30 PM – 1.35 PM
3.	Date and time of receipt at Lab.	05.08.2022 at 10.10 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade Effluent Samples.

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/03/04-08	1029	Aeration outlet	--
SSR/04/04-08	1030	ETP Outlet	--

Parameter to be Analysed:

Sl. No.	Parameters	Unit	Test Sample Code No.		Method
			1029/ SSR/03/04-08	1030/ SSR/04/04-08	
01.	p^H at 25°C	Number	7.82	7.80	APHA 23rd Edi.2017 4500 – H
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	800	32	APHA 23rd Edi.2017 - 2540 - D
03.	Total Dissolved Solids at 180°C	mg/l	2024	1672	APHA 23rd Edi.2017 2540 - C
04.	Chloride as Cl	mg/l	450	290	APHA 23rd Edi.2017 4500-ClB
05.	Sulphates as SO_4	mg/l	46	32	APHA 23rd Edi.2017 - 4500 E
06.	Oil & Grease	mg/l	7	<4	APHA 23rd Edi.2017 5520 - D
07.	BOD (at 27°C for 3 days)	mg/l	108	30	IS3025 (P44) 1993 Reaffirmed 2009
08.	COD	mg/l	912	224	APHA 23rd Edi.2017 5220
09.	Cyanide	mg/l	<0.05	<0.05	APHA 23rd Edi.2017 4500-CN-E
10.	Total Kjeldahl Nitrogen	mg/l	38.08	3.36	APHA 23rd Edi. 2017 4500 - N_{org} B

Note: < = Indicates Less than Minimum Detectable Limit.

- End of Test Report –

Checked by

Chief Scientific Officer
Dy.Quality Manager.

Authorized Signatory

Assistant Director (Lab).
Quality Manager.

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.
Accredited by NABL – (ISO/IEC 17025:2017)

TC 9899

ROA NO.411/TNPCB/AEL – SLM/2022– 23 Dt. 30.09.2022

ULR-TC98992200001535

1.	Name and address of the sender	The District Environmental Engineer Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	20.09.2022 at 4.35 PM to 4.40 PM
3.	Date and time of receipt at Lab.	21.09.2022 at 4.50 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.
6.	Date of Analysis	21.09.2022 - 30.09.2022

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/19/20-09	1506	ETP Outlet	-

TEST REPORT

Sl. No.	Parameters	Unit	Test Sample Code Nos.	Method
			1506/ BLA/19/20-09	
01.	p^H at 25°C	Number	7.64	APHA 23rd Edn 2017 (4500 H+)
02.	Total Suspended Solids at 103°C – at 105°C	mg/l	24	APHA 23rd Edn 2017 (2540 -D)
03.	Total Dissolved Solids at 180°C	mg/l	664	APHA 23rd Edn.2017 (2540 C)
04.	Chloride as Cl	mg/l	150	APHA 23rd Edn.2017 (4500 Cl B)
05.	Sulphates as SO_4	mg/l	<5	APHA 23rd Edn.2017 (4500 SO4-E)
06.	Oil & Grease	mg/l	<3	APHA 23rd Edn.2017 (5520 B)
07.	BOD (at 27°C for 3 days)	mg/l	8.7	IS 3025 (Part-44)
08.	COD	mg/l	72	APHA 23rd Edn 2017 (5220 B)
09.	Cyanide	mg/l	<0.05	APHA 23rd Edn.2017 (4500-CN E)
10.	Total Kjeldahl Nitrogen	mg/l	2.24	APHA 23rd Edn. 2017 (4500-Norg-B)

Note: < = Indicates Less than Minimum Detectable Limit.

* Results relate only to the tested samples.

** The report shall not be reproduced except in full without approval of the laboratory can provide assurance that parts of a report are not taken out of context.

Checked by

Chief Scientific Officer
Dy.Quality Manager.

Authorized Signatory

Assistant Director (Lab).
Quality Manager.

- End of Test Report –

TAMIL NADU POLLUTION CONTROL BOARD
ADVANCED ENVIRONMENTAL LABORATORY
No. 76, MOUNT SALAI, GUINDY,
CHENNAI - 32.

TEST REPORT

NABL TC-10097

DBS CERT ISO 45001 : 2018

ULR - TC100972200000820F

ROA No.December-2016 - December-2018/2022 - 2023/ Dated:02.01.2023

Name and Address of the sender	:	The Additional Chief Environmental Engineer, Tamil Nadu Pollution Control Board, Guindy, Chennai-32.		
Nature and number of samples	:	3 Numbers of Complaint Samples	Sample quantity 2.5 L	Sealed and fastened in 2.5 L polythene container
Date and time of sample collection	:	27.12.2022 12.50 PM to 1.30 PM	Date & time of sample receipt at the lab	28.12.2022 at 10.30 AM
Point of Collection	1	ETP - aeration Tank outlet / Partially Treated		
	2	Rain water harvesting pond / -		
	3	ETP - Clarifier / Partially Treated		
Analysis Starting date	:	28.12.2022	Analysis Completion date	02.01.2023

Sl. No.	DEE Code No. / Lab Code No. / Parameters	Unit	DMP-04 Dec-2016	DMP-05 Dec-2017	DMP-06 Dec-2018	Test Method
1	pH @ 25°C	Number	7.60	7.23	7.60	APHA 23rd Edn 2017, 4500 H^+ B
2	Total Suspended solids @ 105°C	mg/L	384	34	564	APHA 23rd Edn 2017, 2540 D
3	Total Dissolved Solids @ 180°C	mg/L	–	746	–	APHA 23rd Edn 2017, 2540-C
4	Fixed Dissolved Solids @550°C	mg/L	3556	–	3016	APHA 23rd Edn 2017-2540 E
5	Chloride as Cl	mg/L	330	190	350	APHA 23rd Edn 2017, 4500-Cl B
6	Sulphate as SO_4	mg/L	**	45	**	APHA 23rd Edn 2017 4500-SO_4^{2-} - E
7	BOD (3 days @ 27°C)	mg/L	360	9	352	IS 3025 (Part - 44) :1993, Reaff: 2009
8	COD	mg/L	936	32	824	IS 3025 (Part – 58), Reaff 2006
9	Total Kjeldahl Nitrogen	mg/L	185.92	16.8	350.56	APHA 23rd Edn 2017, 4500 - N- B
10	Percent Sodium	%	23	67	24	AEL-CHN/SOP/W28 Issue No.01/Date: 14.07.2014

Note: < BDL indicates Less that minimum detectable limit.
The Test results relate only to the items tested as received.
** - Sulphate could not ascertained due to interference

31/1/23

Authorized Signatory
[AD (L)/ Dy.CSO]
[Sankara Subramanian, B. Helen Mary]

31/1/23

VARALAKSHMI STARCH INDUSTRIES PRIVATE LIMITED,
PAPPIREDDIPATTI, DHARMAPURI.

CONSOLIDATED REPORT OF ANALYSIS OF TREATED EFFLUENT SAMPLE COLLECTED BY DEE/ AEE, TNPCB DHARMAPURI FROM ETP AND ANALYZED IN TNPCB LAB, SALEM.

REPORTED VALUES OF TREATED WASTE WATER SAMPLES DRAWN FROM JAN 2023 TO APR 2024

	ROA No. and Date				ROA NO. 738 / AEL-SLM / 2022-23 Dt 30.01.2023	ROA NO. 845 / AEL-SLM / 2022-23 Dt 08.03.2023	ROA NO. 13 / AEL-SLM / 2023-24 Dt 13.04.2023	ROA NO. 422 / AEL-SLM / 2022-23 Dt 10.10.2023	ROA NO. 506 / AEL-SLM / 2022-23 Dt 17.10.2023	ROA NO. 592 / AEL-SLM / 2023-24 Dt 20.11.2023	ROA NO. 688 / AEL-SLM / 2023-24 Dt 13.12.2023	ROA NO. 820 / AEL-SLM / 2023-24 Dt 23.01.2024	ROA NO. 912 / TNPCB/AEL-SLM / 2023-24 Dt 28.02.2024	ROA NO. 959 / TNPCB/AEL-SLM / 2023-24 Dt 12.03.2024	ROA NO. 1069 / TNPCB/AEL-SLM / 2023-24 Dt 03.04.2024	ROA NO. 72 / TNPCB/AEL-SLM / 2024-25 Dt 15.05.2024
	SAMPLE COLLECTION DEE/ AEE DATE				19.01.23	23.02.23	31.03.23	31.08.23	20.09.23	13.10.23	27.11.23	29.12.23	31.01.2024	20.02.2024	22.03.2024	26.04.2024
	TNPCB LAB ROA DATE				17.02.23	06.04.23	21.05.23	11.10.23	26.10.23	27.11.23	15.12.23	06.02.24	28.02.2024	12.03.2024	03.04.2024	15.05.2024
S.No	Parameters	Units	in Consent Orders*	for Own land Irrigation**	DEE CODE No. BLA/19/ 19-01	DEE CODE No. SSR/04/ 23-02	DEE CODE No. BLA/72/ 31-03	DEE CODE No. BLA/196/ 31-08	DEE CODE No. BLA/203/19-09	DEE CODE No. BLA/226/ 13-10	DEE CODE No. BLA/262/27-11	DEE CODE No. BLA/299/29-12	DEE CODE No. BLA/35/31-01	DEE CODE No. BLA/42/20-02	DEE CODE No. TSK/15/22-03	DEE CODE No. DEEDMP-240017
					ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET	ETP OUTLET
1	pH at 25°C	Number	5.5 -9	**5.5 - 9.0**	8.06	8.00	8.91	7.08	7.88	7.88	7.67	7.79	7.58	7.82	8.06	7.70
2	Total Suspended Solids at 103°C - at 105°C	mg/l	100	**200**	44	68	12	32	32	4	28	36	4	12	32	60
3	Total Dissolved Solids at 180°C	mg/l	2100	**2100**	856	1396	1452	604	1988	1592	1392	568	884	892	1616	1472
4	Chloride as Cl	mg/l	1000	**600**	145	300	360	166	625	607	508	105	1715	215	580	350
5	Sulphate as SO4	mg/l	1000	**1000**	<5	40	<5	30	87	47	52	25	13	62	<5	143
6	Oil & Grease	mg/l	10	**10**	8	12	<3									
7	BOD (at 27°C for 3 days)	mg/l	30	**100**	46	81	18	19	6	3.3	16	8	14	24	16	24
8	COD	mg/l	250	-	256	320	368	104	96	24	128	128	120	120	176	196
9	Cyanide	mg/l	0.2	**0.2**	<0.08	<0.08	<0.08	<0.008	<0.008	<0.008		<0.008	<0.008	<0.008	<0.008	<0.008
10	Total Kjeldahl Nitrogen	mg/l			33.6	12.32	8.4	8.4	5.04	3.36		1.68	3.36	1.68	1.68	4.48
11	Amonickal Nitrogen as NH3-N	mg/l			11.2	3.92	2.8	2.8		1.12		0.56	1.12	0.56	0.56	1.12
12	Total Hardness as CaCo3	mg/l						190	620	440	620	370	290	280	480	360
13	Calcium as Ca	mg/l						16		48				32	32	28
14	Magnesium as Mg	mg/l						37		78				49	97	70
15	% Sodium	%						32	46		34	35	32	30		
16	Alkalinity as CaCO3	mg/l								388				292	692	308
17	Nitrate Nitrogen as NO3	mg/l								0.065	0.778	0.389	9.535	10.368	1.26	8.06
18	SAR	mg/l											2.26			

Note:
* Norms in Consent Order - For disposing in Inland Surface Water
** Norms for Own Land irrigation has been obtained from The Environmental (Protection) Rules, 1986

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

TC9899

ULR-TC98992200002690

ROA NO. 738/AEL – SLM/2022 – 23 Dt. 30.01.2023

1.	Name and address of the sender	The District Environmental Engineer
		Tamilnadu Pollution Control Board
		Dharmapuri.
2.	Date and time of collection	19.01.2023 at 05.35 PM
3.	Date and time of receipt at Lab.	20.01.2023 at 04.00 PM
4.	Condition of seal, fastening and Container	Sealed / Unfastened Condition in Polythene carbuoy 2.5 Lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.
6.	Date of Analysis	20.01.2023 – 30.01.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/19/19-01	2581	ETP outlet	-

Test Report

Sl. No.	Parameters	Unit	Test Sample Code No. 2581/ BLA/19/19-01	Test Method
01.	pH at 25°C	mg/l	8.06	APHA 23rd Edn (4500H+)
02.	TSS at 103°C – at 105°C	mg/l	44	APHA 23rd Edn (2540 D)
03.	Total Dissolved Solids at 180°C	mg/l	856	APHA 23rd Edn (2540 C)
04.	Chloride as Cl	mg/l	145	APHA 23rd Edn (4500 Cl B)
05.	Sulphates as SO_4	mg/l	<5	APHA 23rd Edn (4500 SO_4 –E)
06.	Oil & Grease	mg/l	8	APHA 23rd Edn (5520 B)
07.	BOD (at 27°C for 3 days)	mg/l	46	IS3025 (Part -44)
08.	COD	mg/l	256	APHA 23rd Edn (5220 B)
09.	Ammonical Nitrogen as NH_3 -N	mg/l	11.2	APHA 23rd Edn(4500-NH_3 C)
10.	Total Kjeldahl Nitrogen	mg/l	33.6	APHA 23rd Edn (4500-Norg-B)
11.	Cyanide	mg/l	<0.08	APHA 23rd Edn (4500- CN E)

Note: 1) < Indicates Less than Minimum Detectable Limit.
* Results relate only to the items tested samples.
**The reports shall not be reproduced except in fully approval of the laboratory can provide assurance that parts of a reports are not taken out of context.

Checked by
17/2/23
Env. Scientist

Authorized Signatory
R. Saroja 17/2/23
for Chief Scientific Officer
Dy. Quality Manager.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

TC9899

ROA NO. 845/AEL – SLM/2022 – 23 Dt. 08.03.2023

ULR-TC98992200003085

1.	Name and address of the sender	The District Environmental Engineer
		Tamilnadu Pollution Control Board
		Dharmapuri.
2.	Date and time of collection	23.02.2023 at 03.45 PM
3.	Date and time of receipt at Lab.	24.02.2023 at 01.30 PM
4.	Condition of seal, fastening and Container	Sealed / Unfastened Condition in Polythene carbuoy 2.5 Lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.
6.	Date of Analysis	24.02.2023 – 06.03.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
SSR/04/23-02	2964	ETP outlet	-

Test Report

Sl. No.	Parameters	Unit	Test Sample Code No. 2964/ SSR/04/23-02	Test Method
01.	pH at 25°C	mg/l	8.00	APHA 23rd Edn (4500H+)
02.	TSS at 103°C – at 105°C	mg/l	68	APHA 23rd Edn (2540 D)
03.	Total Dissolved Solids at 180°C	mg/l	1396	APHA 23rd Edn (2540 C)
04.	Chloride as Cl	mg/l	300	APHA 23rd Edn (4500 Cl B)
05.	Sulphates as SO_4	mg/l	40	APHA 23rd Edn (4500 SO_4 –E)
06.	Oil & Grease	mg/l	12	APHA 23rd Edn (5520 B)
07.	BOD (at 27°C for 3 days)	mg/l	81	IS3025 (Part -44)
08.	COD	mg/l	320	APHA 23rd Edn (5220 B)

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09.	Ammonical Nitrogen as NH_3 -N	mg/l	3.92	APHA 23rd Edn(4500-NH_3 C)
10.	Total Kjeldahl Nitrogen	mg/l	12.32	APHA 23rd Edn (4500-Norg-B)
11.	Cyanide	mg/l	<0.08	APHA 23rd Edn (4500- CN E)

Note: 1) < Indicates Less than Minimum Detectable Limit.

* Results relate only to the items tested samples.

**The reports shall not be reproduced except in fully approval of the laboratory can provide assurance that parts of a reports are not taken out of context.

Checked by

5/4/23

Env. Scientist

Authorized Signatory

6/4/23

Chief Scientific Officer

Dy. Quality Manager.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

TC9899

ROA NO. 13/AEL – SLM/2023 – 24 Dt. 13.0.2023

ULR-TC98992300000003

1.	Name and address of the sender	The District Environmental Engineer Tamilnadu Pollution Control Board Dharmapuri.
2.	Date and time of collection	31.03.2023 at 06.00 PM
3.	Date and time of receipt at Lab.	01.04.2023 at 10.30 AM
4.	Condition of seal, fastening and Container	Sealed / Unfastened Condition in Polythene carbuoy 2.5 Lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade Effluent Sample.
6.	Date of Analysis	01.04.2023 – 10.04.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/72/31-03	6	ETP Inlet	-

Test Report

Sl. No.	Parameters	Unit	Test Sample Code No.	Test Method
			6/ BLA/72/31-03	
01.	pH at 25°C	mg/l	8.91	APHA 23rd Edn (4500H+)
02.	TSS at 103°C – at 105°C	mg/l	12	APHA 23rd Edn (2540 D)
03.	Total Dissolved Solids at 180°C	mg/l	1452	APHA 23rd Edn (2540 C)
04.	Chloride as Cl	mg/l	360	APHA 23rd Edn (4500 Cl B)
05.	Sulphates as SO_4	mg/l	<5	APHA 23rd Edn (4500 SO_4 –E)
06.	Oil & Grease	mg/l	<3	APHA 23rd Edn (5520 B)
07.	BOD (at 27°C for 3 days)	mg/l	18	IS3025 (Part -44)
08.	COD	mg/l	368	APHA 23rd Edn (5220 B)

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09.	Ammonical Nitrogen as NH_3 -N	mg/l	2.8	APHA 23rd Edn(4500-NH_3 C)
10.	Total Kjeldahl Nitrogen	mg/l	8.4	APHA 23rd Edn (4500-Norg-B)
11.	Cyanide	mg/l	<0.08	APHA 23rd Edn (4500- CN E)

Note: 1) < Indicates Less than Minimum Detectable Limit.
* Results relate only to the items tested samples.
**The reports shall not be reproduced except in fully approval of the laboratory can provide assurance that parts of a reports are not taken out of context.

Checked by

R Saxena 11/5/23

Env. Scientist

Authorized Signatory

11/5/23

Chief Scientific Officer
Dy. Quality Manager.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 442/TNPCB/AEL - SLM/2022– 23 Dt. 10.10.2023

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	31.08.2023 at 12:30 PM and 12:35 PM
3.	Date and time of receipt at Lab.	01.09.2023 at 11:00 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	01.09.2023 - 13.09.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/195/31-08	1599	Anaerobic Lagoon Outlet	-
BLA/196/31-08	1600	Aeration Tank Outlet	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			1599/BLA/ 195/31-08	1600/BLA/ 196/31-08	
1.	pH at 25°C	Number	**7.75**	**7.08**	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	**64**	**32**	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	**2888**	**604**	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	**705**	**166**	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	**186**	**30**	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	**156**	**19**	IS 3025 (Part-44)
7.	COD	mg/l	**1040**	**104**	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	**7.28**	**2.8**	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	**21.28**	**8.4**	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Total Hardness as $CaCO_3$	mg/l	**460**	**190**	APHA 23rd Edn. 2017 (2340 C)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			1599/BLA/ 195/31-08	1600/BLA/ 196/31-08	
11	Calcium as Ca	mg/l	48	16	APHA 23rd Edn. 2017 (3500 B)
12	Magnesium as Mg	mg/l	83	37	APHA 23rd Edn. 2017 (2340 C)
13	% Sodium	%	73	32	TNPCB/AELSLM/SOP/35 Issue No.1, DT: 25 April 2014
14	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: <= Indicates Less than Minimum Detectable Limit.

Checked by

M.D 7/11/10/23

Environmental Scientist

Authorized Signatory

S.D 11/10/2023

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 506 /TNPCB/AEL – SLM/2022– 23, Dated. 17.10.2023

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	19.09.2023 at 04:10 PM
3.	Date and time of receipt at Lab.	20.09.2023 at 10:10 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 1 No.
5.	Nature and Number of samples	1 No. of Trade effluent Sample.
6.	Date of Analysis	20.09.2023 - 17.10.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/203/19-09	1796	Water in Primary Clarifier (not in operation)	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos. 1796/BLA/ 203/19-09	Test Method
1.	pH at 25°C	Number	7.88	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	32	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	1988	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	625	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	87	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	6	IS 3025 (Part-44)
7.	COD	mg/l	96	APHA 23rd Edn 2017 (5220 B)
8.	Total Kjeldahl Nitrogen	mg/l	5.04	APHA 23rd Edn. 2017 (4500 -N_{org} B)
9.	Total Hardness as $CaCO_3$	mg/l	620	APHA 23rd Edn. 2017 (2340 C)
10.	% Sodium	%	46	TNPCB/AELSLM/SOP/35 Issue No.1, DT: 25 April 2014
11.	Cyanide	mg/l	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

M·D 7/26/10/23

Environmental Scientist

Authorized Signatory

S.D 26/10/2023

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

(3)

ROA No. 592/TNPCB/AEL – SLM/2023– 24, Dated. 20.11.2023

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	13.10.2023 at 12:55 PM and 01:00 PM
3.	Date and time of receipt at Lab.	13.10.2023 at 06:45 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	16.10.2023 - 20.11.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/226/13-10	2306	MBR outlet	-
BLA/227/13-10	2307	Stagnated water at green belt (Lat:11897045, Long: 78.375809)	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			2306/BLA/ 226/13-10	2307/BLA/ 227/13-10	
1.	pH at 25°C	Number	7.88	7.99	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	4	64	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	1592	2904	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	607	947	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	47	82	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	3.3	21	IS 3025 (Part-44)
7.	COD	mg/l	24	480	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	1.12	1.12	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	3.36	3.36	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Total Hardness as $CaCO_3$	mg/l	440	950	APHA 23rd Edn. 2017 (2340 C)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			2306/BLA/ 226/13-10	2307/BLA/ 227/13-10	
11	Calcium as Ca	mg/l	48	40	APHA 23rd Edn. 2017 (3500 B)
12	Magnesium as Mg	mg/l	78	207	APHA 23rd Edn. 2017 (2340 C)
13	Alkalinity as $CaCO_3$	mg/l	388	784	APHA 23rd Edn. 2017 (2320 B)
14	Nitrate Nitrogen as NO_3	mg/l	0.065	0.097	APHA 23rd Edn. 2017 (4500 NO_3-B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

27/11/23

Environmental Scientist

Authorized Signatory

27/11/2023

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 688/TNPCB/AEL – SLM/2023– 24, Dated. 13.12.2023

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	27.11.2023 at 02:25 PM and 02:30 PM
3.	Date and time of receipt at Lab.	27.11.2023 at 06:00 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	28.11.2023 - 13.12.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/262/27-11	2625	Clarifier Outlet	-
BLA/263/27-11	2626	MBR Outlet	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			2625/BLA/ 262/27-11	2626/BLA/ 263/27-11	
1.	pH at 25°C	Number	7.67	7.75	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	28	16	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	1392	968	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	508	352	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	52	32	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	16	4.8	IS 3025 (Part-44)
7.	COD	mg/l	128	32	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	***	***	APHA 23rd Edn. 2017 (4500 -NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	***	***	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Total Hardness as $CaCO_3$	mg/l	620	430	APHA 23rd Edn. 2017 (2340 C)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			2625/BLA/ 262/27-11	2626/BLA/ 263/27-11	
11	% Sodium	%	**34**	**36**	TNPCB/AEL-SLM/SOP/35, Issue No:1, Dated 25 April 2014.
12	Nitrate Nitrogen as NO_3	mg/l	**0.778**	**0.243**	APHA 23rd Edn. 2017 (4500 NO_3-B)
13	Cyanide	mg/l	***	***	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

*** **Not Performed.**

Checked by

15/12/23

Environmental Scientist

Authorized Signatory

S.D 15/12/2023

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 820/TNPCB/AEL – SLM/2023– 24, Dated. 23.01.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	29.12.2023 at 12:40 PM and 12:45 PM
3.	Date and time of receipt at Lab.	29.12.2023 at 05:30 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	29.12.2023 - 23.01.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/298/29-12	3090	Aeration Tank Outlet	-
BLA/299/29-12	3091	Clarifier Outlet	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			3090/BLA/ 298/29-12	3091/BLA/ 299/29-12	
1.	pH at 25°C	Number	7.55	7.79	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	56	36	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	616	568	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	95	105	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	34	25	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	12	8.0	IS 3025 (Part-44)
7.	COD	mg/l	152	128	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	1.12	0.56	APHA 23rd Edn. 2017 (4500 -NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	3.36	1.68	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Total Hardness as $CaCO_3$	mg/l	400	370	APHA 23rd Edn. 2017 (2340 C)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			3090/BLA/ 298/29-12	3091/BLA/ 299/29-12	
11	% Sodium	%	20	35	TNPCB/AEL-SLM/SOP/35, Issue No:1, Dated 25 April 2014.
12	Nitrate Nitrogen as NO_3	mg/l	0.432	0.389	APHA 23rd Edn. 2017 (4500 NO_3-B)
13	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

Environmental Scientist

Authorized Signatory

06/02/2024

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 912/TNPCB/AEL – SLM/2023– 24, Dated: 28.02.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	31.01.2024 at 03:50 PM and 03:55 PM
3.	Date and time of receipt at Lab.	31.01.2024 at 06:00 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	01.02.2024 - 28.02.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/34/31-01	3376	Settling Tank	-
BLA/35/31-01	3377	Clarifier Outlet	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			3376/BLA/ 34/31-01	3377/BLA/ 35/31-01	
1.	pH at 25°C	Number	7.90	7.58	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	76	4	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	2028	884	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	290	1715	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	12	13	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	300	14	IS 3025 (Part-44)
7.	COD	mg/l	960	120	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	1.12	1.12	APHA 23rd Edn. 2017 (4500 -NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	3.36	3.36	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	10.584	9.535	APHA 23rd Edn. 2017 (4500 NO_3-B)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			3376/BLA/ 34/31-01	3377/BLA/ 35/31-01	
11	% Sodium	%	**10**	**32**	TNPCB/AEL-SLM/SOP/35, Issue No:1, Dated 25 April 2014.
12	Total Hardness as $CaCO_3$	mg/l	**1000**	**290**	APHA 23rd Edn. 2017 (2340 C)
13	SAR	mg/l	**0.55**	**2.26**	Calculation Method
14	Cyanide	mg/l	**<0.008**	**<0.008**	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

28/2/24

Environmental Scientist

Authorized Signatory

28/02/2024

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 959/TNPCB/AEL – SLM/2023– 24, Dated: 12.03.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	20.02.2024 at 01:00 PM and 01:10 PM
3.	Date and time of receipt at Lab.	21.02.2024 at 10:45 AM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	21.02.2024 - 12.03.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
BLA/41/20-02	3537	Settling Tank	-
BLA/42/20-02	3538	Clarifier Outlet	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			3537/BLA/ 41/20-02	3538/BLA/ 42/20-02	
1.	pH at 25°C	Number	**8.02**	**7.82**	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	**200**	**12**	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	**3768**	**892**	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	**600**	**215**	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	**85**	**62**	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	**120**	**24**	IS 3025 (Part-44)
7.	COD	mg/l	**400**	**120**	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	**1.12**	**0.56**	APHA 23rd Edn. 2017 (4500 -NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	**2.80**	**1.68**	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	**6.746**	**10.368**	APHA 23rd Edn. 2017 (4500 NO_3-B)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			3537/BLA/ 41/20-02	3538/BLA/ 42/20-02	
11	% Sodium	%	69	30	TNPCB/AEL-SLM/SOP/35, Issue No:1, Dated 25 April 2014.
12	Total Hardness as $CaCO_3$	mg/l	1000	280	APHA 23rd Edn. 2017 (2340 C)
13	Calcium as Ca	mg/l	120	32	APHA 23rd Edn. 2017 (3500 B)
14	Magnesium as Mg	mg/l	170	49	APHA 23rd Edn. 2017 (2340 C)
15	Alkalinity as $CaCO_3$	mg/l	516	292	APHA 23rd Edn. 2017 (2320 B)
16	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

M. A 12/3/24
Environmental Scientist

Authorized Signatory

S.M 12/03/2024
Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 1069 /TNPCB/AEL – SLM/2023– 24, Dated: 03.04.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	22.03.2024 at 01:30 PM and 01:35 PM
3.	Date and time of receipt at Lab.	22.03.2024 at 03:35 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	22.03.2024 - 03.04.2024

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
TSK/14/22-03	3859	Settling Tank (Outlet)	-
TSK/15/22-03	3860	Clarifier Outlet	-

TEST REPORT

Sl. No	Parameters	Unit	Test sample code Nos.		Test Method
			3859/TSK/ 14/22-03	3860/TSK/ 15/22-03	
1.	pH at 25°C	Number	7.99	8.06	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	40	32	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	2028	1616	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	520	580	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	42	<5	APHA 23rd Edn.2017 (4500 SO4-E)
6.	BOD (at 27°C for 3 days)	mg/l	26	16	IS 3025 (Part-44)
7.	COD	mg/l	216	176	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	0.56	0.56	APHA 23rd Edn. 2017 (4500 -NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	2.24	1.68	APHA 23rd Edn. 2017 (4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	1.48	1.26	APHA 23rd Edn. 2017 (4500 NO_3-B)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			3859/TSK/ 14/22-03	3860/TSK/ 15/22-03	
11	Total Hardness as $CaCO_3$	mg/l	600	480	APHA 23rd Edn. 2017 (2340 C)
12	Calcium as Ca	mg/l	24	32	APHA 23rd Edn.2017 (3500 Ca B)
13	Magnesium as Mg	mg/l	131	97	APHA 23rd Edn. 2017 (3500 Mg)
14	Alkalinity as $CaCO_3$	mg/l	620	692	APHA 23rd Edn. 2017 (2320 B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

G/3.4.24

Environmental Scientist

Authorized Signatory

S.ok EQ

03/04/2024

Chief Scientific Officer (a/c),
AEL, TNPCB, Salem.

- End of Test Report –

ADVANCED ENVIRONMENTAL LABORATORY,
TAMILNADU POLLUTION CONTROL BOARD,
SALEM – 636 004.

ROA No. 72 /TNPCB/AEL – SLM/2024– 25, Dated: 15.05.2024

1.	Name and address of the sender	The District Environmental Engineer, Tamilnadu Pollution Control Board, Dharmapuri.
2.	Date and time of collection	26.04.2024 at 01:45 PM and 01:55 PM
3.	Date and time of receipt at Lab.	26.04.2024 at 06:10 PM
4.	Condition of seal, fastening and Container	Sealed/Unfastened Condition in Polythene carbuoy 2.5 lits X 2 Nos.
5.	Nature and Number of samples	2 Nos. of Trade effluent Samples.
6.	Date of Analysis	26.04.2024 - 15.05.2023

DEE Code No.	Lab Code No.	Point of Collection	Whether Untreated/ Treated
DEEDMP-240016	221	Settling Tank (Outlet)	-
DEEDMP-240017	222	Clarifier Outlet	-

TEST REPORT

Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240016/221	DEEDMP-240017/222	
1.	pH at 25°C	Number	7.69	7.70	APHA 23rd Edn 2017 (4500 H+)
2.	Total Suspended Solids at 103°C – at 105°C	mg/l	836	60	APHA 23rd Edn 2017 (2540 -D)
3.	Total Dissolved Solids at 180°C	mg/l	1468	1472	APHA 23rd Edn.2017 (2540 C)
4.	Chloride as Cl	mg/l	360	350	APHA 23rd Edn.2017 (4500 Cl B)
5.	Sulphates as SO_4	mg/l	130	143	APHA 23rd Edn.2017(4500 SO_4-E)
6.	BOD (at 27°C for 3 days)	mg/l	780	24	IS 3025 (Part-44)
7.	COD	mg/l	1480	196	APHA 23rd Edn 2017 (5220 B)
8.	Ammonical Nitrogen as NH_3-N	mg/l	1.68	1.12	APHA 23rd Edn. 2017 (4500 - NH_3C)
9.	Total Kjeldahl Nitrogen	mg/l	5.04	4.48	APHA 23rd Edn.2017(4500 -N_{org} B)
10.	Nitrate Nitrogen as NO_3	mg/l	7.870	8.06	APHA 23rd Edn.2017(4500 –NO_3 B)

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Sl. No.	Parameters	Unit	Test sample code Nos.		Test Method
			DEEDMP-240016/221	DEEDMP-240017/222	
11	Total Hardness as $CaCO_3$	mg/l	830	360	APHA 23rd Edn. 2017 (2340 C)
12	Calcium as Ca	mg/l	36	28	APHA 23rd Edn. 2017 (3500 B)
13	Magnesium as Mg	mg/l	58	70	APHA 23rd Edn. 2017 (2340 C)
14	Alkalinity as $CaCO_3$	mg/l	206	308	APHA 23rd Edn. 2017 (2320 B)
15	Cyanide	mg/l	<0.008	<0.008	APHA 23rd Edn. 2017 (4500 CN E)

Note: < = Indicates Less than Minimum Detectable Limit.

Checked by

15.5.24

Environmental Scientist

Authorized Signatory

15/05/2024

Chief Scientific Officer (FAC),
AEL, TNPCB, Salem.

- End of Test Report –

Annexure - II

92

உரிமையை உரக்க சொல்வோம்

RNI-TNTAM:2023/89366

நீதி உரிமை
NEETHI URIMAI

ஆசிரியர்
சி எஸ், அருள் முருகன்
93630 67974

செய்தி ஆசிரியர்
ஆ. சூரியமூர்த்தி
73056 92174

BREAKING NEWS
NEETHI URIMAI TV

தர்மபுரி மாவட்டம், பாப்பிரெட்டிப்பட்டி பேரூராட்சி கழிவுநீர் பீனிஆற்றில் விடுவது கண்டிக்கத்தக்க செயலாகும், எனவே மாவட்ட நிர்வாகம், மாசு கட்டுப்பாட்டு வாரியம், பொதுப்பணித்துறை அலுவலர், பாப்பிரெட்டிப்பட்டி *EO* மீது உடனடியாக நடவடிக்கை எடுக்க வேண்டும் தவறும் பட்சத்தில்,

தமிழக விவசாயிகள் பாதுகாப்பு சங்கம் மற்றும் பீனியாறு விவசாயிகள் மேம்பாட்டு நலச்சங்கம் மாவட்ட நிர்வாகத்தை முற்றுகையிட்டு ஆர்ப்பாட்டம் நடைபெறும் என்று அவர்கள் தெரிவித்தனர்

Email.neethiurimai.gmail.com


திட்டக்கழிவு மேலாண்மை திட்டம்
தர்மபுரி மாவட்டம் - DRDA

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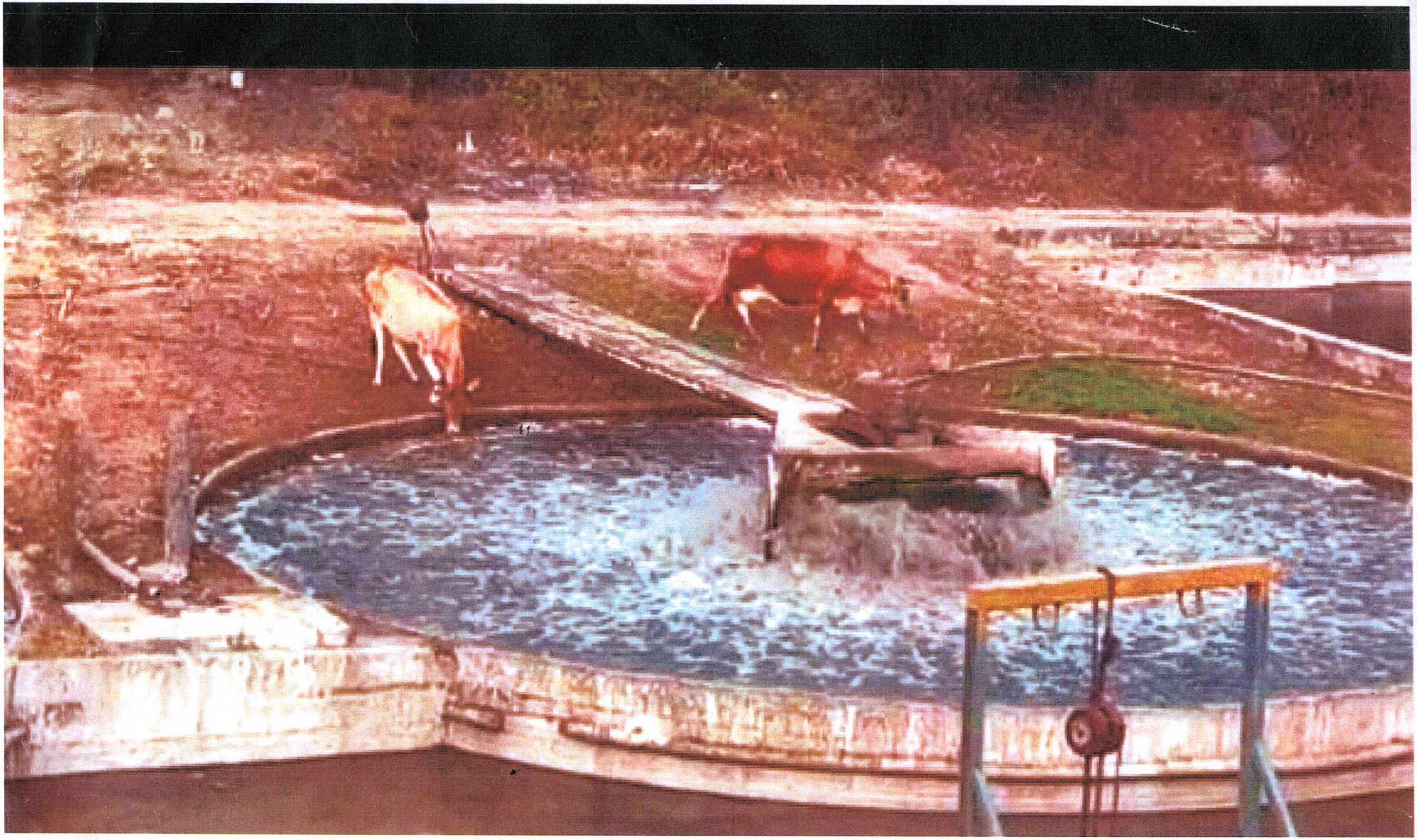
PENDA
Clinton
CRYSTAL


GPS Map Camera
Alapuram, Tamil Nadu, India
W9cj+83, Alapuram, Tamil Nadu 636905, India
Lat 11.921064° Long 78.381326°
30/11/24 12:20 PM GMT +05:30
Google



ANNEXURE – 13

Anaerobic Pit - 1

Anaerobic Pit - 2

Adjacent Area of ETP

Annexure - 14

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Received on 24.9.24 By Registered post without Acknowledgment

நீர்வள ஆதாரத் துறை

அனுப்புநர்
திரு.K.சுரேஷ்,M.Sc.,Tech.,
பொதுத் தகவல் அலுவலர்,நீஆது.,
நிலநீர் கோட்டம்,
சேலம்-7.

பெறுநர்
திரு. V.அன்பழகன்,
87/1, காந்திரோடு,
அஸ்தம்பட்டி,
சேலம்-7.

க.எண். 10 /தஅஉச/உஇ(நி)/நிநீஉகோ/சே/2024/ நாள். 12 .09.2024.

ஐயா,

பொருள்: தகவல் அறியும் உரிமைச் சட்டம் 2005 - திரு.V.அன்பழகன், சேலம் மாவட்டம் அவர்களின் தகவல் அறியும் உரிமை சட்டம் 2005-ன் கீழ் பெறப்பட்ட மனு அனுப்பி வைத்தல் குறித்து.

பார்வை: 1. மனுதாரர் திரு. V.அன்பழகன், 87/1, காந்திரோடு, அஸ்தம்பட்டி, சேலம் அவர்களின் தகவல் அறியும் உரிமைச் சட்ட மனு நாள்.31.07.2024. (இவ்வலுவலகத்தில் பெறப்பட்ட நாள்.19.08.2024).
2. செயற்பொறியாளர்,நீவது., நிலநீர் கோட்டம், சேலம் அவர்களின் மே.கு.எண்.290^{s}/உநிஇ/கோவிகுமை/நிநீகோ/சே/தஅஉச/2024/ நாள்.13.08.2024.

* * * * * * * * *

பார்வை 1மற்றும் 2ல் காணும் கடிதங்களின்படி கிடைக்கப்பெற்ற மனுவிற்கு கீழ்கண்டவாறு பதில் அளிக்கப்படுகிறது.

- M/s. Shri varalakshmi sago foods private limited எண்.1/162, எண்.3, குமாரபாளையம் கிராமம், வெண்ணந்தூர் பிர்க்கா, ராசிபுரம் வட்டம், நாமக்கல் மாவட்டம் மற்றும் M/s. Sri Venkateswara Sago Factory, நாமக்கல் மாவட்டம் என்ற நிறுவனங்களுக்கு நிலநீர் எடுக்க தொழிற்சாலை உபயோகத்திற்காக (Industrial purpose) நிலநீர் தடையின்மைச் சான்றுக்கு பரிந்துரை செய்து இவ்வலுவலகத்திலிருந்து அறிக்கை தலைமை அலுவலகத்திற்கு அளிக்கப்படவில்லை. மேலும் தலைமை அலுவலகத்திலும் மேற்சொன்ன நிறுவனங்களுக்கு தொழிற்சாலை உபயோகத்திற்காக நிலநீர் தடையின்மை சான்று வழங்கப்படவில்லை என அறிய வருகிறது.

பொதுத் தகவல் அலுவலர், நீஆது.,
மற்றும் உதவி இயக்குநர்(நி),
நிலநீர் கோட்டம்,
சேலம்-7.

Date: 31.07.2024

From:

V Anbalagan
87/1, Gandhi Road,
Husthampatti,
Salem – 636007.

To:

The First Appellate Authority / The Public Information Officer,
The Executive Engineer,
Public Works Department, WRD,
Sarabanga Basin Division,
Namakkal.

Dear Sir / Madam,

Sub: An Appeal under Section 19 of RTI Act, 2005.

Ref: 1) My application for information under RTI Act, 2005 dated 19.02.2024..

2) கடிதஎண்.185 s / உபொ(வ)/கோ 7 தஅஉச/31RTI/2024/நாள்.28.03.2024 of The Public Information Officer, AE WRD, Sarabanga Basin Division, Salem office forwarding our RTI Application dated 19.02.2024 to your office for necessary action.

The Undersigned hereby submit an appeal application with the following details:-

1. The Public Information Office, Public Works Department, WRD, Sarabanga Basin Division, Namakkal against the appeal is preferred.

2. The Particulars of information required:- I had applied for the request of the details of No Objection Certificate / Licence for Extraction of Groundwater issued Under G.O Ms.No.52 Dated 02.03.2012, for taping Ground Water in the over exploited area to Shri Varalakshmi Sago Food Private Limited (formerly Shri Varalakshmi Company) by your department for the industrial use purpose.

3. Brief facts leading to appeal:- Till date I have not received the requested information referred in my RTI Application from The Public Works Department, WRD, Sarabanga Basin Division, Namakkal office on 19.02.2024. So, now I am submitting an appeal to your good office for getting the details applied in my RTI Application.

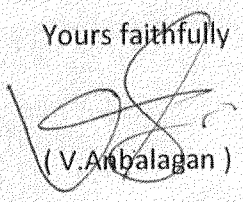
4. Appeal grounds for the prayer:- Because of non receipt of the required details / NOC issued to Shri Varalakshmi Sago Food Private Limited (formerly Shri Varalakshmi Company) as per para-2 from the Public Works Department, WRD, Sarabanga Basin Division, Namakkal office till date, I am making this appeal to your good office for providing the copy of the NOC Details mentioned in the RTI Application. Herewith, I have enclosed the Xerox copy of the RTI Application originally submitted to your office and The Xerox copy of the letter cited in the reference no.2 from your salem branch office is enclosed for your reference.

I am providing all the information in this appeal is true and correct to my knowledge.

Kindly provide me the order copy and do the needful.

Thanking You,

Yours faithfully



(V.Anbalagan)

Encl: 1) Xerox copy of My RTI Application Dated 19.02.2024.

2) கடித எண்.185 s / உபொ(வ)/கோ 7 தஅஉச/31RTI/2024/நாள்.28.03.2024

of The Public Information Officer, AE WRD, Sarabanga Basin Division, Salem.

Annexure - 15

TAMIL NADU POLLUTION CONTROL BOARD

Action Plan on Rejuvenation of River Thirumanimutharu Salem to Papparapatti Stretch (Priority-I)

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CONTENTS

Comprehensive Report on Prevention and Control of Pollution in River Thirumanimutharu (Priority-I) - An Action Plan for Rejuvenation

1.0 Introduction

The Hon'ble National Green Tribunal (NGT) Principal Bench took Suo-Moto Cognizance of news report appeared in "The Hindu" authorized by Shri. Jacob Koshy titled "More River Stretches are now critically polluted – CPCB" and issued directions in para 50(i) to (x) vide its Original Application No. 673/2018 dated: 20.09.2018

1. All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e., BOD < 3 mg/L and FC < 500 MPN/100 ml) within six months from the date of finalisation of the action plans.

2. The action plans may be prepared by a four-member Committee comprising,

   a. **Director, Environment**

   b. **Director, Urban Development**

   c. **Director, Industries**

   d. **Member Secretary, TNPCB**

   This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called as **"River Rejuvenation Committee" (RRC).** The RRC will function under the overall supervision and coordination of Principal Secretary, Environment & Forest, Govt. of Tamil Nadu.

3. The action plan will include components like identification of polluting sources including functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterization of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall

also be considered as an important component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/Committee and out of Central Schemes.

4. The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.

5. The Chief Secretaries of the State and Administrators/ Advisors to Administrators of the Union Territories will be personally accountable for failure to formulate action plan, as directed.

6. All States and Union Territories are required to send a copy of Action Plan to CPCB especially with respect to Priority I & Priority II stretches for approval.

7. The States and the Union Territories concern are directed to set up Special Environment Surveillance Task Force, comprising nominees of District Magistrate, Superintendent of Police, Regional Officer of State Pollution Control Board and one person to be nominated by District Judge in his capacity as Chairman of Legal Services Authority on the pattern of direction of this Tribunal dated 07.08.2018, in Original Application No. 138/2016 (TNHRC), "Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case).

8. The Task Force will also ensure that no illegal mining takes place in riverbeds of such polluted stretches.

9. The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement and failure may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.

10. The RRCs will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by this Tribunal in order dated 13.07.2017 in O.A No. 200 of 2014, M.C. Mehta Vs. U.O.I will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

Based on the directions of Hon'ble NGT (PB) vide its Original Application No. 673/2018 dated: 20.09.2018 the Principal Secretary (Environment & Forest) has convened the River rejuvenation committee meeting on 14.11.2018 regarding the directions issued by the Hon'ble NGT (PB) to prepare action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu with the heads of the following departments:

1. Municipal Administration and Rural development and its line departments,
2. Chennai Metro Water Supply and Sewage Board.
3. Tamil Nadu Water Supply and Drainage Board.
4. Environment & Forest.
5. Central Pollution Control Board, Bangalore.
6. Tamil Nadu Pollution Control Board.

In the meeting it was decided to evolve the detailed action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu. The minutes of the meeting was communicated to the above departments requesting certain details with action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu. Remainder was also communicated to the above departments.

As per the Hon'ble NGT (PB) directions in its Original Application No. 673/2018 dated: 20.09.2018, Four member River Rejuvenation Committee (RRC) was constituted in Tamil Nadu and Government Order (G.O.) was issued by the Environment and Forest (EC.1) Department vide G.O. (D) No. 372 dated: 26.12.2018 (copy enclosed) to execute and to review the action plan for the Rejuvenation/Restoration of water along the polluted river stretches in Tamil Nadu as ordered by the Hon'ble National Green Tribunal, Principal Bench. River Rejuvenation Committee (RRC) members are as follows:

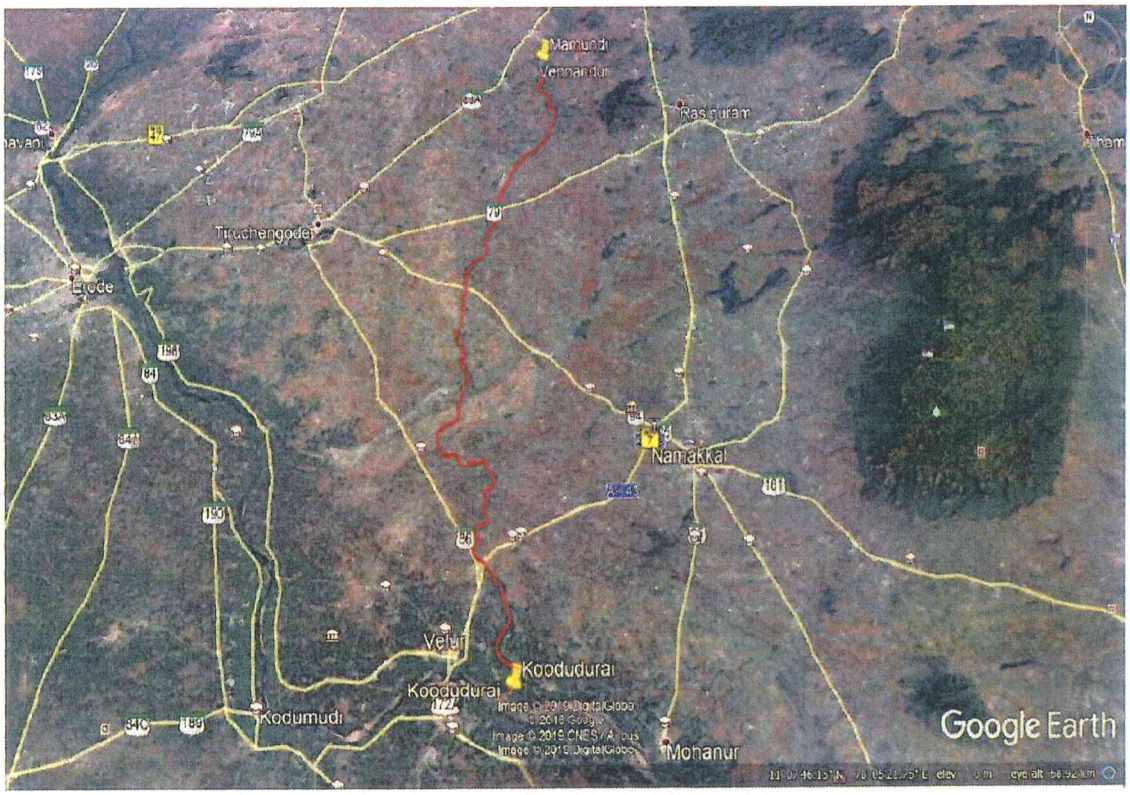
1. Industries Commissioner.
2. Commissioner, Municipal Administration.
3. The Director of Environment.
4. The Member Secretary, Tamil Nadu Pollution Control Board.

The RRC will function under the overall supervision and coordination of Principal Secretary, Environment and Forests Department, Government of Tamil Nadu.

2.0. Introduction about the River Thirumanimutharu:

The River Thirumanimutharu originates from Manjavadi in Shevaroy Mountain and flows through the Salem and Namakkal District. It arises in the Yercaud hills. River Thirumanimutharu joins the River Cauvery at Nanjai Edayar place in Namakkal District. In Salem District the River flows over a stretch of approximately 55 KM from Manjavadi in Shevaroy Mountain and flows upto Papparapatti. From Papparapatti it enters into the Namakkal District and confluences with River Cauvery at Nanjai Edayar. In Namakkal District the River Thirumanimutharu enters at Mamundi Village, Rasipuram taluk and ends at Koodudurai village, Mohanur Taluk, The total length of River Thirumanimutharu is about 62 KM in Namakkal district. River Thirumanimutharu flows through Acchankuttapati, Kuppanur, Pallipatti, Vallaiyakaranur, Salem Town, Veerapandi, Attayampatti, Papparapatti and Namakkal district. From Papparapatti it enters into Namakkal District and confluences with the River Cauvery at Nanjai Edayar.

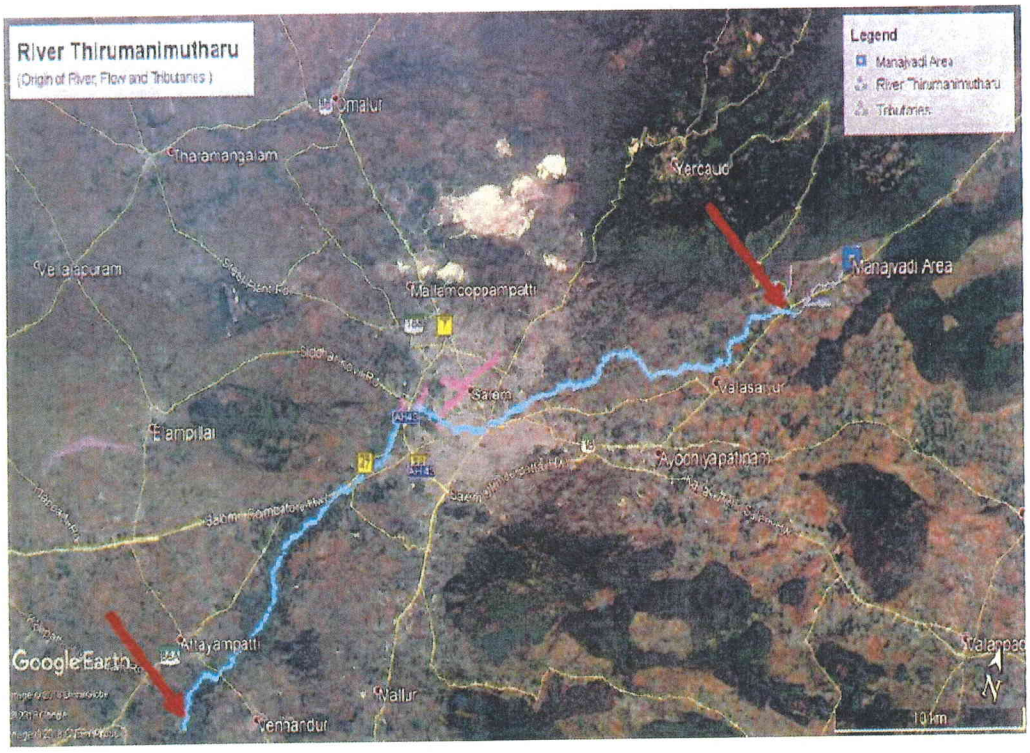
RIVER STRETCH MAP



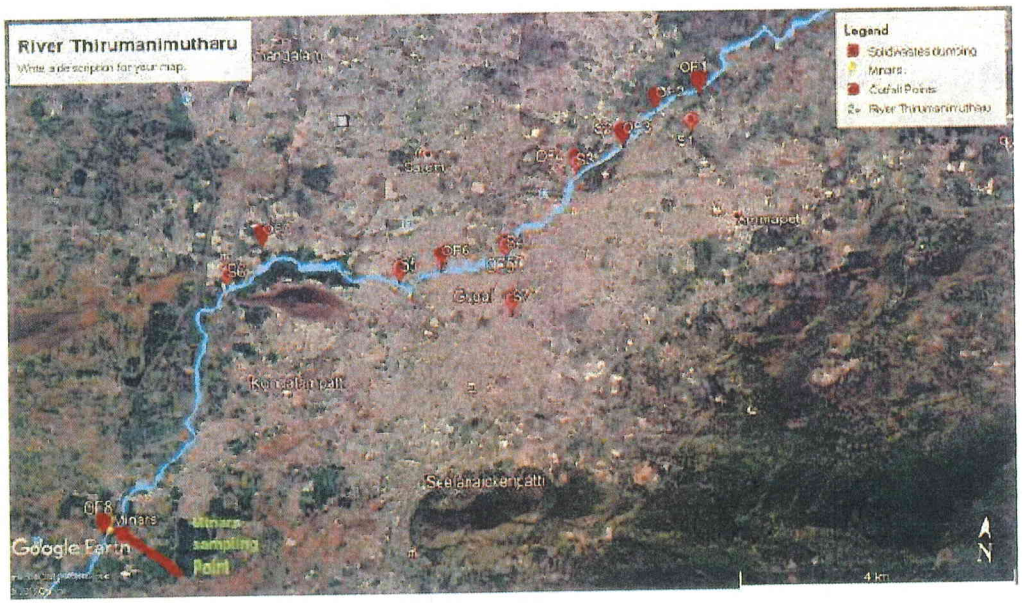
3.0 Source of Pollution in the River Stretch:

Industries such as Sago units, Textile Dyeing and Bleaching units are located along the banks of the River Thirumanimutharu.

The Salem Corporation is located along/adjacent to the River Thirumanimutharu and its sewage is discharged into the river. The Salem City Municipal Corporation has established 4 Nos of Sewage Treatment Plants (STPs) with capacity 98 MLD, in which 3 Nos of STPs are yet to put into operation where one of the STP is under operation and the treated sewage is being discharged into the River Thriumanimutharu. The remaining untreated sewage generated is now being discharged into the River Thriumanimutharu.



Map showing the River Thirumanimutharu - Salem to Papparapatti Polluted River Stretch – 15 KM



Sewage Outfall Points

1. Nearby Sengal Anai (OF1)
2. Nearby Balaji Nagar (OF2)
3. Gokul Nagar Jairam college Back side (OF3)
4. Anaimedu STP (OF4)
5. Bose Ground, Old Bus Stand back side (OF5)
6. Shevapet Police Station Market (OF6)
7. Pallapatti lake overflow (OF7)
8. Uthamasolapuram (OF8)

Solid wastes dumping Points

1. Nearby Seelavari Lake (S 1)
2. Gokul Nagar Bridge (S2)
3. Nearby Anaimedu STP (S3)
4. Gundupodu Bridge (S 4)
5. Sandaipet road bridge (S5)
6. Kandapatti Bypass bridge (S6)
7. Odai nearby Panchathangi Eri (S7)

a. Total Sewage Generation by the Salem corporation based on the No of STP's capacity -98 MLD

b. Total Solid Wastes Generation by Salem Corporation - 370 T/Day

Sewage Outfall Points – 8 Locations				
Sl. No.	Sewage Out-fall Location	Name of the Local Body	GPS Co-ordinates	
			Latitude	Longitude
1	Nearby Sengal Anai	Salem Corporation	$11^0$40'25"N	$78^0$10'56"E
2	Nearby Balaji Nagar	Salem Corporation	$11^0$40'17"N	$78^0$10'35"E
3	Gokul Nagar Jairam College Back side	Salem Corporation	$11^0$39'59"N	$78^0$10'20"E
4	Anaimedu STP	Salem Corporation	$11^0$39'45"N	$78^0$09'58"E
5	Bose Ground, Old Bus Stand back side	Salem Corporation	11°39'04"N	78°09'26"E
6	Shevapet Police Station Market	Salem Corporation	11°38'58"N	78°08'55"E
7	Pallapatti lake overflow	Salem Corporation	11°39'04"N	78°07'28"E
8	Uthamasolapuram	Salem Corporation	11°36'49"N	78°06'19"E
Solid Waste Dumping Points – 7 Locations				
Sl. No.	Solid Waste Dumping Points	Name of the Local Body	GPS Co-ordinates	
			Latitude	Longitude
1	Near Seelavari Lake	Salem Corporation	11°40'06.0"N	78°10'52.6"E
2	Near Gokul Nagar Bridge	Salem Corporation	11°39'59.0"N	78°10'20.6"E
3	Anaimedu	Salem Corporation	11°39'43.3"N	78°09'58.0"E
4	Near Gundupodu Bridge	Salem Corporation	11°39'03.2"N	78°09'26.0"E
5	Near Sandaipet road bridge	Salem Corporation	11°38'50.8"N	78°08'34.9"E
6	Near Kandapatti Bypass bridge	Salem Corporation	11°38'44.2"N	78°07'12.0"E
7	Odai @ Panchanthangi Eri	Salem Corporation	11°38'38.4"N	78°09'30.0"E

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Photographs Showing the Sewage Out-fall Points

Near Sengal Anai
11040'25"N,78010'56"E

Nearby Balaji Nagar
11040'17"N,78010'35"E

Gokul Nagar Jairam college Back side
11°39'59"N, 78°10'20"E

Anaimedu STP
11°39'45"N, 78°09'58"E

Bose Ground, Old Bus Stand back side
11°39'04"N 78°09'26"E

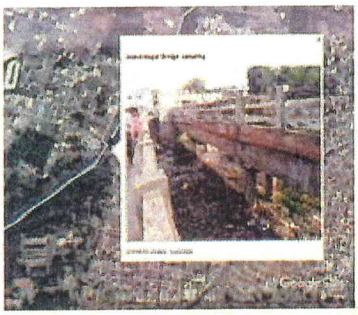
Shevapet Police Station Market
11°38'58"N 78°08'55"E

Pallapatti lake overflow
11°39'04"N 78°07'28"E

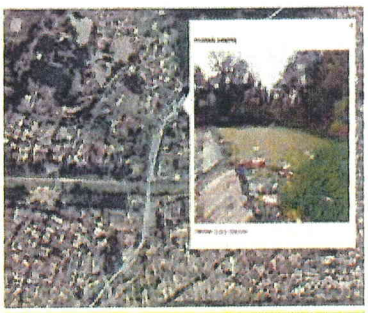
Uthamasolapuram
11°36'49"N 78°08'19"E

Photographs showing the Solid Waste Dumping Points

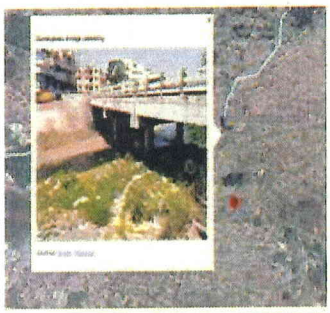
Nearby Seelavari Lake - 11°40'06.0"N 78°10'52.6"E



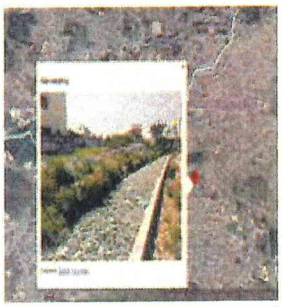
Gokul Nagar Bridge - 11°39'59.0"N 78°10'20.6"E



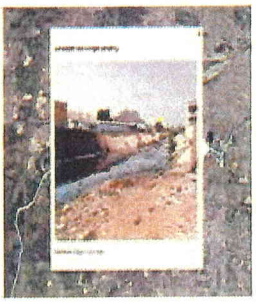
Anaimedu - 11°39'43.3"N 78°09'58.0"E



Gundupodu Bridge - 11°39'03.2"N 78°09'26.0"E



Odai @ Panchanthangi Eari - 11°38'38.4"N 78°09'30.0"E



Sandaipet road bridge 11°38'50.8"N 78°08'34.9"E

Kandapatti Bypass bridge 11°38'44.2"N 78°07'12.0"E

4.0 District/Area wise details of industries

4.1 Details of industries in Salem Corporation and surrounding area

Sl. No.	Taluk	LARGE				MEDIUM				SMALL				Total
		Red	Orange	Green	White	Red	Orange	Green	White	Red	Orange	Green	White	
1	Salem	2	13	3	0	1	8	0	0	76	205	65	7	**380**
2	Salem West	7	7	2	0	1	13	0	1	11	137	64	6	**249**
3	Salem South	1	2	2	1	0	4	2	1	74	162	64	8	**321**
4	Vazhappadi	4	9	3	0	1	3	1	0	13	68	24	2	**128**
	Total	**14**	**31**	**10**	**1**	**3**	**28**	**3**	**2**	**174**	**572**	**217**	**23**	**1078**

4.2 Details of industries generating trade effluent located in the taluks where the River passes:

Type of units	Salem	Salem West	Salem South	Valappady	Total
Sago, Textile Dyeing/Bleaching, Dairy, Granite cutting, Steam Calendering, Washing, STPs, Steel industries and etc.	143	97	78	39	357

Details of industries is enclosed in **Annexure –1**

5.0 Inspection Team Members:

Inspection teams were formed by Tamil Nadu Pollution Control Board including Engineers and Scientists for inspection, sample collection and analysis of samples along the entire polluted river stretch as per the Hon'ble NGT (PB) directions in its original application number 673/2018 dated: 20.09.2018.

Sl. No.	Polluted River Stretch	Jurisdiction Office	Name of the Team Members Tvl	Designation
1	Thirumanimutharu River Salem to Paparapatti Priority- 1	O/o AEL, Salem.	D. Mohanambigai	Assistant Director(Lab)
2		O/o, DEL, Dindugal	M. Sakthivel	Deputy CSO
3		O/o AEL, Salem	S. Munirathnam	Field Assistant
4		O/o, AEL, Salem	Gopal	Field Assistant

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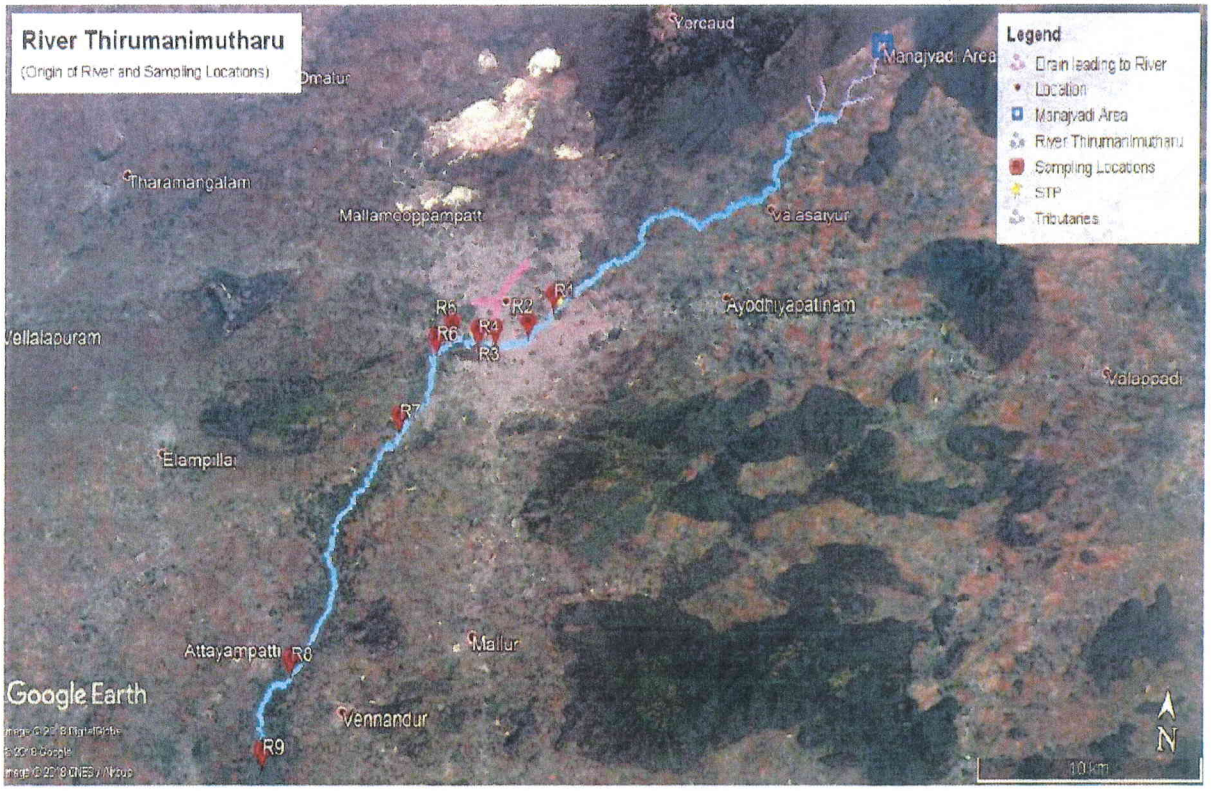
6.0. Details of sample collection from the industries:

Sl. No.	Point of collection	GPS coordinates		Date of sample collection
1	M/s. Steel Authority of India	11°39'36.3"N	78°01'40.5"E	29.09.2018
2	M/s. The Salem District Co-op Milk Producers	11°40'07.4"N	78°05'03.9"E	29.10.2018
3	M/s. Vellakuttai Sewage Treatment Plant	11°39'09.8"N	78°10'13.9"E	29.10.2018

7.0. River water/drain/Ground water samples collected details with live photographs along the river stretch.

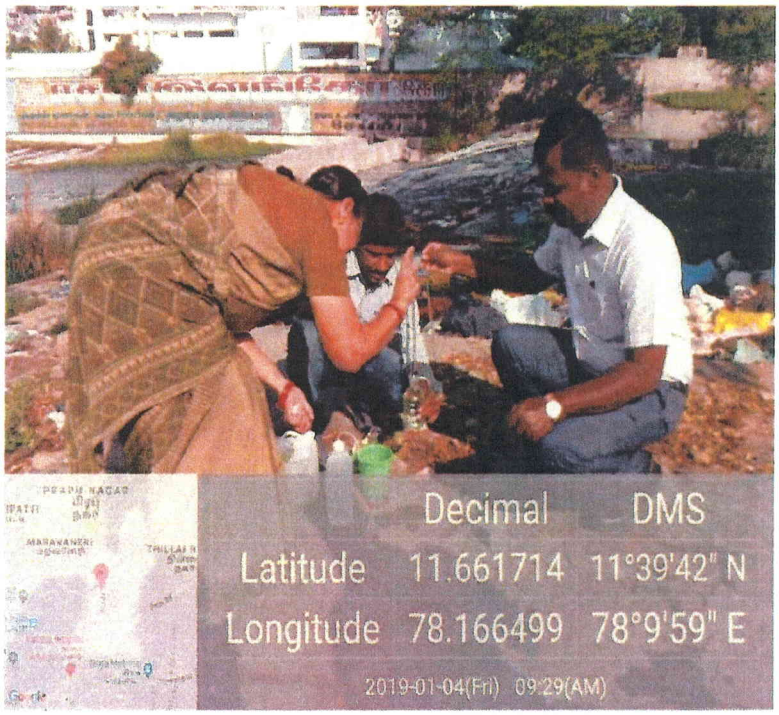
Sl. No.	Point of collection	GPS coordinates		Date of sample collection
1	Near Anaimedu – STP Up Stream	11°39'42.2"N	78°09'59.4"E	04/01/2019
2	Near Bose Maidanam	11°39'03.7"N	78°09'24.0"E	04/01/2019
3	Near Sreeman Theatre	11°38'51.2"N	78°08'34.2"E	04/01/2019
4	Near Rettai Kili Rice Mill	11°39'17.4"N	78°08'42.1"E	04/01/2019
5	Near Siddar Kovil Road	11°38'59.6"N	78°07'59.7"E	04/01/2019
6	Near FedEx Courier Building Road	11°38'55.3"N	78°07'27.0"E	04/01/2019
7	Butterfly Flyover Down stream	11°38'21.3"N	78°07'03.4"E	04/01/2019
8	Papparapatti Down Stream	11°31'32.5"N	78°04'07.0"E	04/01/2019
9	Uthamasolapuram	11°36'49.1"N	78°06'19.2"E	04/01/2019
10	Near Mathiyampatti Padithurai	11°29'36.1"N	78°03'38.2"E	04/01/2019



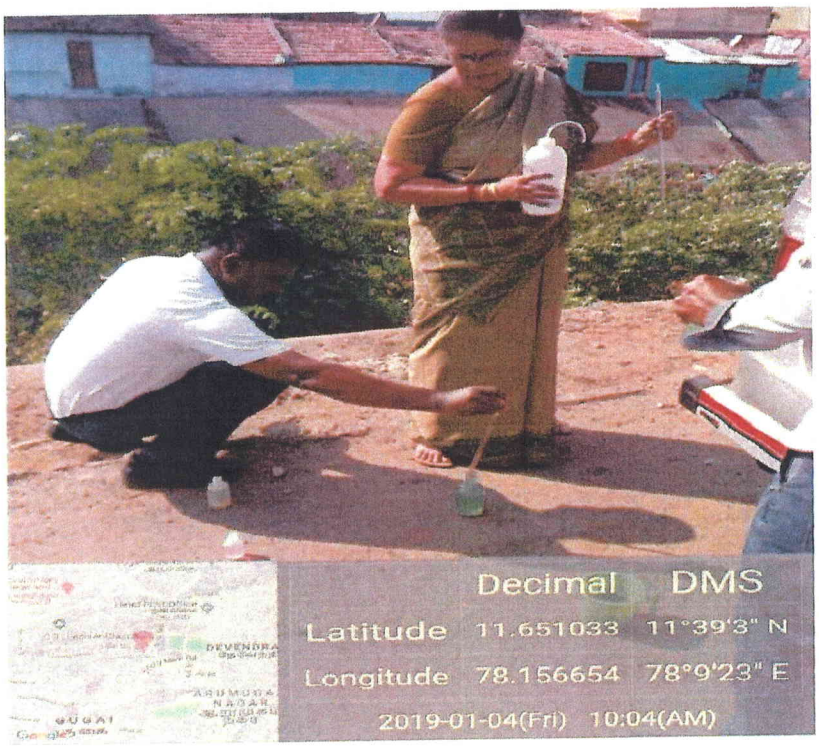
Map showing the location of Sampling along the river stretch

Sample collection Photographs

Sample collected Near Anaimedu – STP Up-Stream

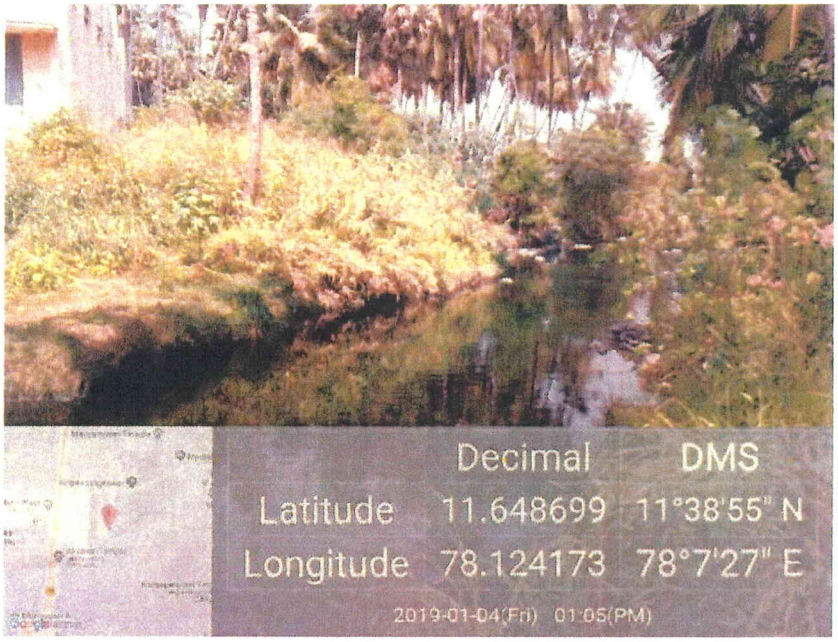


Sample collected Near Bose Maidanam



Sample Collected Near Sreeman Theatre

Sample collected Near Rettai Kili Rice Mill



Sample collected from Near FedEx Courier Building Road

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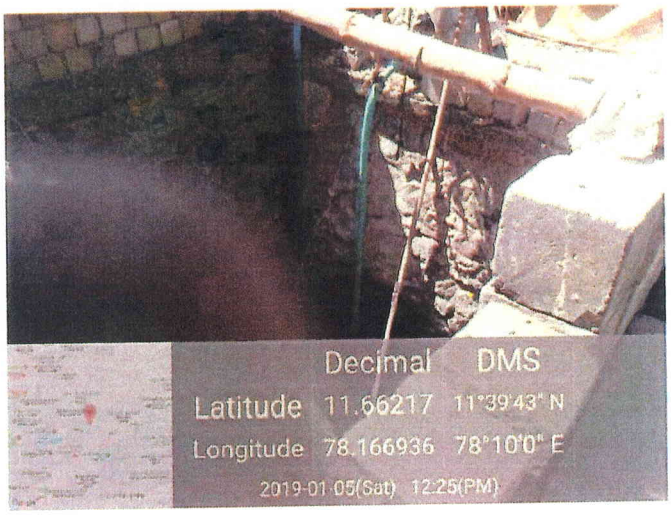
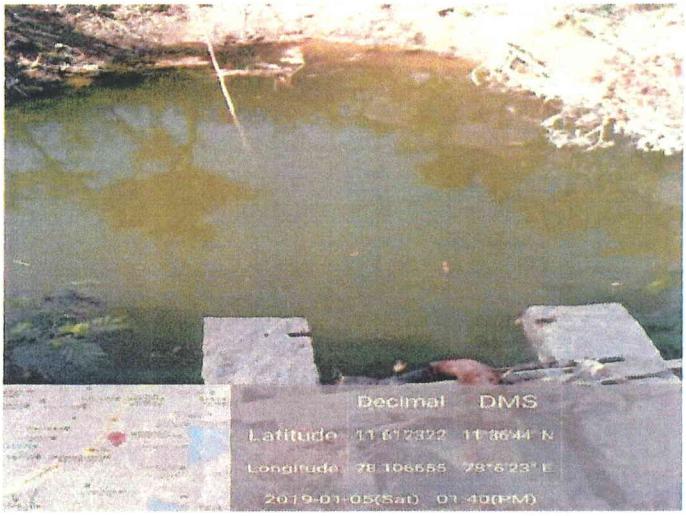
Sample collected from Near Siddar Kovil Road



Ground Water Samples Collected from C.Duraisamy, Nethimedu Salem.

Ground Water Samples collected from C.Duraisamy, Nethimedu Salem



Ground Water Samples Collected from Manickam, Neikaranpatti (Iyar Kadu) Salem

8.0 Status of water quality of river water in the study area.

River water & drain samples are collected from River Thirumanimutharu is given in the table - for general parameters and heavy metals

Sl. No.	Sample No.	Point of Collection	DO	Faecal Coliform	BOD	Cu	Zn	Pb	Cd	Ni	Mn	Fe	T.Cr	Status of compliance with respect to WQC limit
			mg/l	MPN/ 100ml	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
1	1796	Anaimedu - STP (Up Stream)	Nil	17 X 10^3	30	<0.0015	<0.0015	<0.015	<0.0008	<0.006	<0.1	0.149	<0.05	Not complied
2	1797	Bose Maidanam	Nil	170x10^9	143	1.391	0.291	<0.015	<0.0008	0.228	<0.1	0.269	<0.05	Not complied
3	1798	Sreeman Theatre	Nil	220x10^{11}	245	0.079	0.112	<0.015	<0.0008	0.277	<0.1	0.167	<0.05	Not complied
4	1799	Rettai Kili Rice Mill	Nil	220x10^{11}	220	<0.0015	<0.0015	<0.015	<0.0008	<0.006	<0.1	0.093	<0.05	Not complied
5	1800	Siddar Kovil Road	Nil	84x10^{11}	245	0.739	0.108	<0.015	<0.0008	0.199	<0.1	0.139	<0.05	Not complied
6	1801	Near Fed - ex Courier Building Road	Nil	94x10^9	170	0.09	0.012	<0.015	<0.0008	0.121	<0.1	0.074	<0.05	Not complied
7	1802	Butterfly Flyover Down	Nil	170x10^6	117	1.05	0.102	<0.015	<0.0008	0.318	<0.1	0.084	<0.05	Not complied
8	1803	Papparapatti Down Stream	0.9	63x10 3	19.2	0.033	0.099	<0.015	<0.0008	002	<0.1	0.065	<0.05	Not complied
9	1804	Uthama solapuram	NIL	33x10^4	75	0.072	0.079	<0.015	<0.0008	0.092	<0.1	0.279	<0.05	Not complied
10	1805	Mathiayampatti Padithurai	6.9	27	10.2	<0.0015	<0.0015	<0.015	<0.0008	0.032	<0.1	0.019	<0.05	Not complied
Water quality criteria (WQC) limit for Bathing			**≥ 5 mg/l**	**≤ 500 MPN/100 ml**	**≤ 3 mg/l**	-	-	-	-	-	-	-	-	-

9.0. Ground water samples collected details along the River stretch:

Sl. No.	Point of collection	GPS coordinates		Date of sample collection
1	Ramaiye, Anaimedu, G.S.T Office (Opposite)(Open Well)	11°39'43.8"N	78°10'01.0"E	05/01/2019
2	C.Duraisamy, Nethimedu Salem. (Bore Well)	11°38'52.8"N	78°08'01.2"E	05/01/2019
3	Manickam, Neikaranpatti (Iyar Kadu) Salem (Open Well)	11°36'44.4"N	78°06'24.0"E	05/01/2019

10.0 Status of water quality of ground water in the study area

Ground water samples were collected at three locations (i.e. Anaimedu GST Office opposite, Nethimedu&Neikaranpatti, Iyyarkadu) by the Inspection team. Ground water sample collected from afore-said location was analysed in TNPCB laboratory. Water Quality Monitoring Results of ground water sample collected by the Inspection team is given in the table below.

Sl. No.	Sample No.	Point of Collection	SO_4	F	O&G	Cu	Zn	Pb	Cd	Ni	Mn	Fe	T.Cr	Status of compliance with respect to WQC limit
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
1	1810	Ramaiye Anaimedu GST Office Opposite (Open well)	61	0.898	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.380	1.303	0.06	<0.05	Nickel & Maganese not Complied
2	1811	C.Duraisamy, Nethiumedu, Salem (Bore well)	158	0.322	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.34	<0.1	0.07	<0.05	Nickel not complied
3	1812	Manickam, Naikaranpatti Iyar Kadu, Salem (Open well)	281	0.898	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.57	<0.1	0.012	<0.05	Nickel & sulphate not complied
IS10500-2012 Drinking water specifications-Acceptable limit (in mg/l)			**200**	**1.0**	**0.5 ***	**0.05**	**5**	**0.01**	**0.003**	**0.02**	**0.1**	**0.3**	**0.05**	**Complied**

Note:

Generally in case of ground water samples, concentration less than or equal to <1 mg/l is indicated as BDL by CPCB laboratories. But as per BIS Drinking water specifications, mineral oil content at 67 GW sampling points exceed the limit of 0.5 mg/l.

11.0 Assessment of Compliance of the effluents/sewage discharge norms by the industries in the study area

Report of Analysis (ROA) is enclosed vide **Annexure- II**

12.0 Status of industry wise consent validity, wastewater generation and final mode of disposal:

Industry details are enclosed vide **Annexure-I**

I. Action Taken against the Erring Textile units:

The District Co-ordination Committee carries out surprising inspection in Salem Corporation area and issues directions for power supply disconnection, if any violation of the consented unit/illegal unit. The details of the action taken is submitted vide Annexure-III.

No of units dismantled	–	277 Nos.
No of unauthorized units EB disconnected	–	71 Nos.
No of consented units EB Disconnected	--	28 Nos.

13.0 Operation status of ETPs and STPs

The unit of M/s. Arthanari Loom Centre Textile Pvt Ltd, Erumapalyam Village, Salem Town, Salem District has installed Effluent Treatment Plant, RO and RMS for the treatment and disposal of trade effluent quantity of 2 MLD. The unit operates and maintains the ETP and achieves ZLD. All the bleaching and dyeing units have provided Zero Liquid Discharge system.

The unit of M/s. Steel Authority of India, Maramangalathupatti Village, Salem West Taluk, Salem District has installed Effluent Treatment Plant, RO and RMS for the treatment and disposal of trade effluent quantity of 6.1 MLD. The unit operates and maintains the ETP and achieves ZLD. The unit has also installed STP for the treatment of Sewage generated from their industries and township and the treated sewage is being utilized for on land for irrigation.

The unit of M/s. The Salem District Co-op Milk Producer Society, Thalavaipatti Village, Salem West Taluk, Salem District has installed Effluent Treatment Plant for the treatment and disposal of trade effluent quantity of 580 KLD. The unit operates and maintains the ETP and utilizes the treated trade effluent for on land for irrigation.

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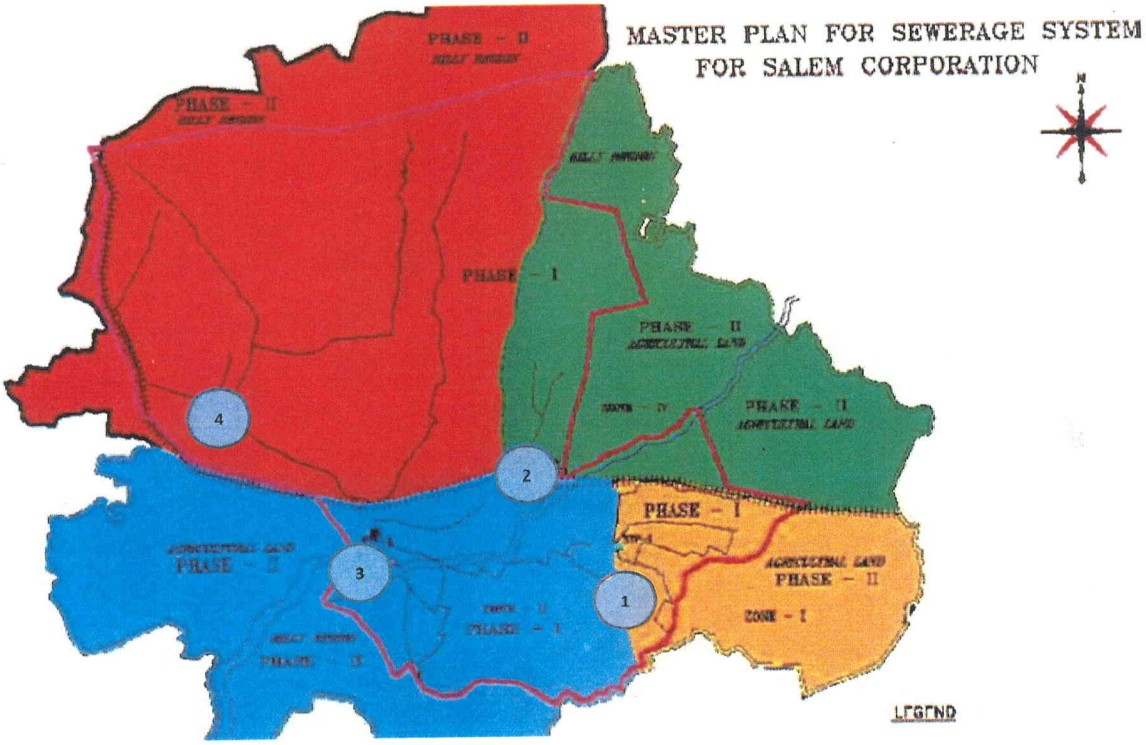
- **Regarding total sewage generation in the city and execution of phase 1 & phase 2**

  Salem Municipal Corporation has planned to control the sewage pollution in two phases. Under the phase one four STPs were constructed having total capacity of 98 MLD and the total length of the completed UGD system was 320.89 Km out of 421.67 Km.The area covered under the phase I and STP locations is shown in the below map.

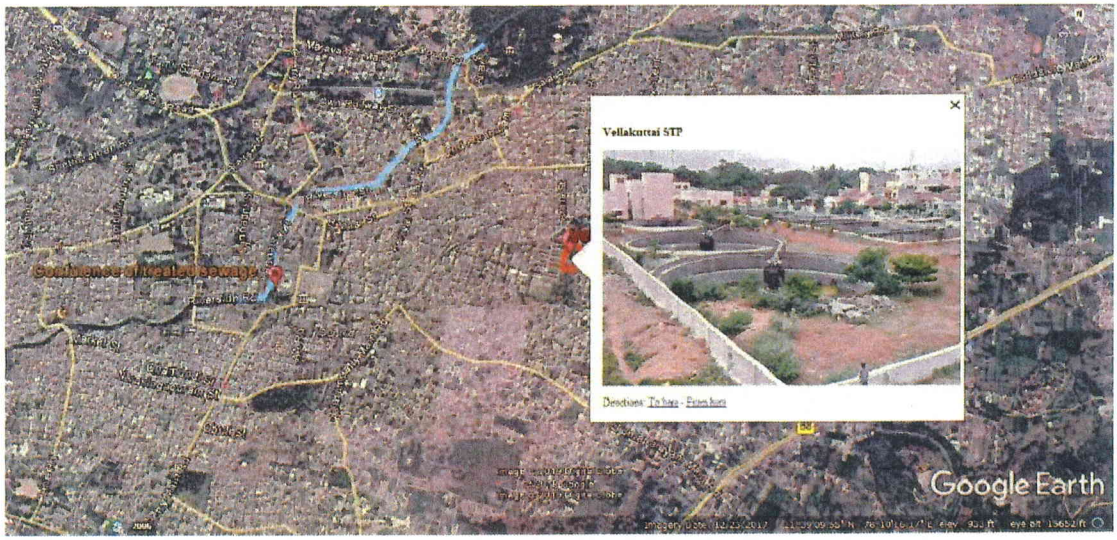


S. No.	Name of the S.T.P	Quantity
1	Vellakuttai STP	13 MLD
2	Anaimedu STP	6 MLD
3	Vandipettai STP	44 MLD
4	Mankuttai STP	35 MLD

Commissioning of STPs are completed four years before itself, but same are not brought into operation because connectivity of the sewer system is not completed yet. So the sewage is not taken to the STP for treatment.

➢ **Any treated sewage is discharged into River Stretch if so latitude and longitude details.**

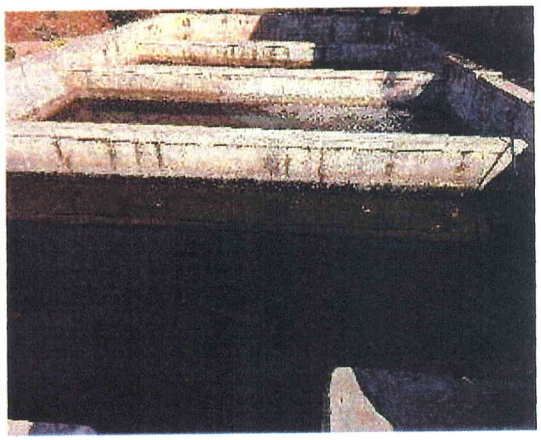
Sl. No.	Details	GPS coordinates		Design Capacity and present inflow
1	M/s. Vellakuttai Sewage Treatment Plant	11°39'09.8"N	78°10'13.9"E	13 MLD/ At present 1.5 to 2 MLD is being treated.
2	Treated Sewage from the above STP confluence with River Thirumanimutharu	11°39'4.60"N	78° 9'27.90"E	Nil



Map showing the location of Vellakuttai STP and confluence of treated sewage in to the River Thirumanimutharu.

This STP is in partial operation. The STP is constructed for 13 MLD capacity, but at present it receives only 1.5 – 2 MLD for treatment. The treatment of sewage is based on modified activated sludge process (MASP). The STP consists of receiving well, removal system (coarse screen, fine screen & grit), aeration tank, secondary clarifier & chlorination tank. The consent was obtained till 31.03.2016 and further applied for renewal.

An open drain carrying the untreated sewage is flowing through this STP, in which the treated sewage is discharged into drain.

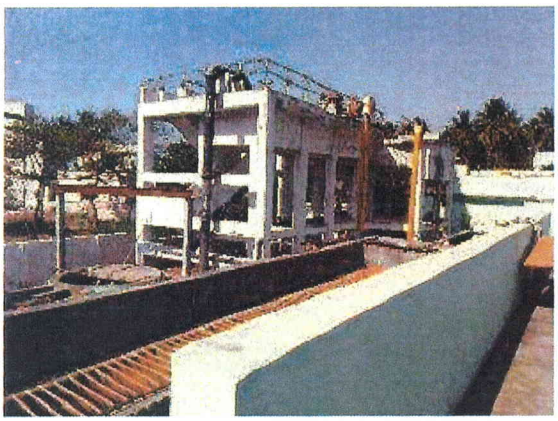


The sample was collected during the monitoring to confirm the quality of treated domestic wastewater. From the analysis result it is evident that the treated domestic waste water meeting the prescribed discharge norms.

Report of Analysis of Treated Domestic Waste Water			
Sl. No.	**Parameters**	**Unit**	**STP Outlet**
01.	pH at 25°C	Number	7.70
02.	TSS at 103°C – at 105°C	mg/l	8
03.	BOD (at 27°C for 3 days)	mg/l	2.4
04.	COD	mg/l	16
05.	Ammonical Nitrogen as NH_3-N	mg/l	3.36
06.	Total Nitrogen	mg/l	0.816
07.	Fecal Coliform	MPN/ 100ML	32

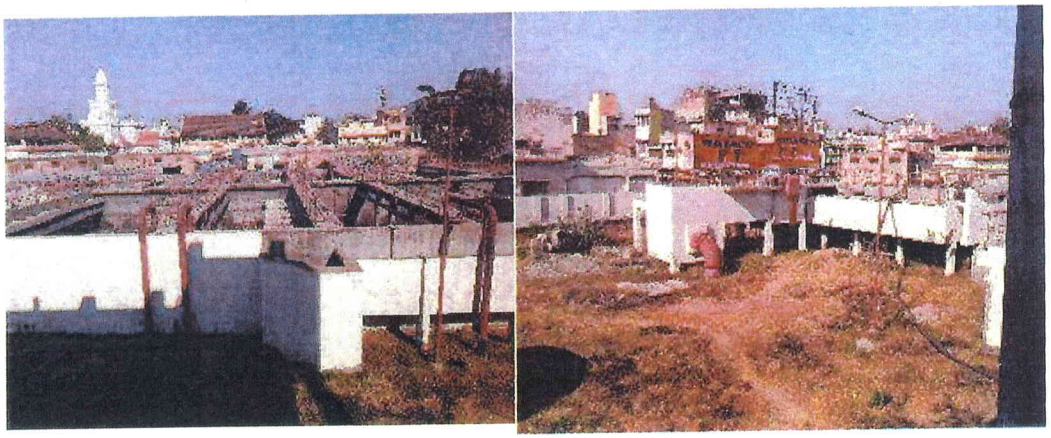
b. Anaimedu STP:

The STP is constructed for 6 MLD capacity. The treatment of sewage is based on MBBR technology. The STP consists of receiving well, removal system (coarse screen, fine screen & grit), grass reactor, MBBR/FAB tank, lamella & chlorination tank. The consent to establish was expired and yet to obtain consents to operate. This STP is constructed in the bank of river Thirumanimuthar, where the check dam has been made.



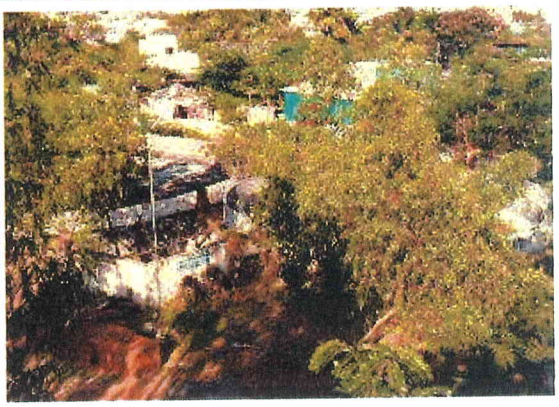
c. Vandipettai STP:

The STP is constructed for 44 MLD capacity. The STP is under construction. The treatment of sewage is based on FAB technology. The STP consists of receiving well, removal system (coarse screen, fine screen & grit, FAB tank, lamella clarifier & chlorination tank). The consents to establish was expired and yet to obtain consent to operate.



d. Mankuttai STP:

The STP is constructed for 35 MLD capacity. The STP is not in operation. The treatment of sewage is based on FAB technology. The STP consists of receiving well, removal system (coarse screen, fine screen, & grit, FAB tank, secondary clarifier & chlorination tank). The consent to operate was obtained and which is valid till March 31, 2019.An open drain carrying the untreated sewage is flowing through this STP.



Details on Consent / Authorization issued by the Board for the establishment of the STP / Solid waste facility

a. Sewage Treatment Plant.

Sl. No	Name and address of the STP	Total Sewage generation in MLD	Disposal (land River sea or any other)	Status Operational/Non-Operational Under Construction	STP present inflow	Consent Status
1	M/s. Mankuttai Sewage Treatment Plant, Salem Corporation Fort, Salem .	35	River Thirumanimuthuaru	Not in operation	-	RCO Issued Valid upto on 31.03.2019
2	M/s. Vandipettai Sewage Treatment Plant, S.F. No. 45, Shevapet, Salem.	44	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013
3	M/s. Vellakuttai Sewage Treatment Plant, Salem Corporation Ammapettai ,Salem.	13	River Thirumanimuthuaru	Under operation	2.0 MLD	CTO Issued Valid upto on 31.03.2016
4	M/s. Anaimedu Sewage Treatment Plant S.F.No.102-1-4 Hasthampatti Zone-II Salem.	6	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013

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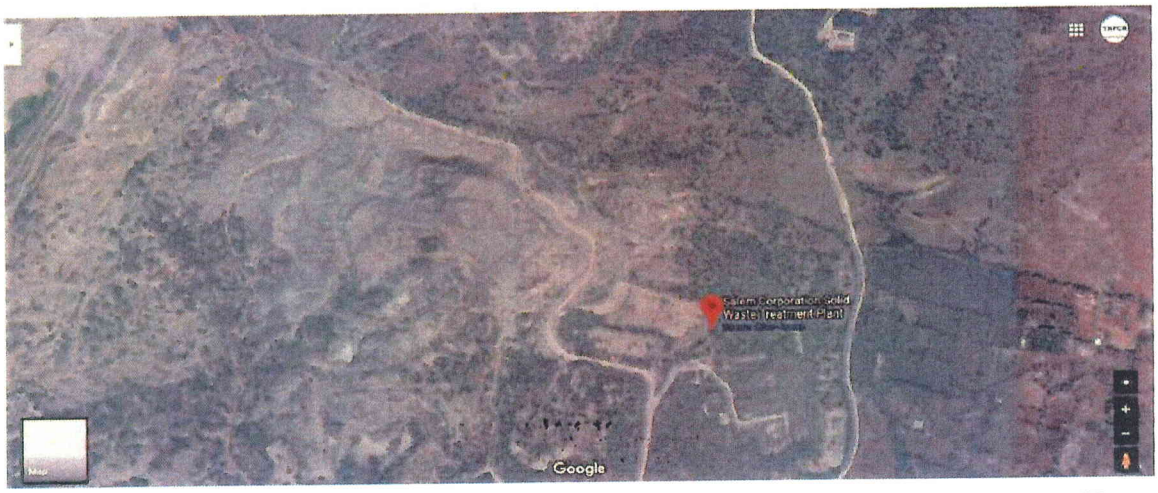
Sl. No	Name and address of the STP	Disposal (land River sea or any other)	Status Operational/Non-Operational Under Construction	STP present inflow	Remarks
1	M/s. Mankuttai Sewage Treatment Plant,	River Thirumanimuthuaru	Under operable conditions	-	Yet to complete the UGSS so as to connect the same to STP
2	M/s. Vandipettai Sewage Treatment Plant	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013
3	M/s. Vellakuttai Sewage Treatment Plant,	River Thirumanimuthuaru	Under operation	2.0 MLD	Yet to complete the UGSS so as to connect the same to STP. Sewage from partially completed UGSS is being treated in the STP.
4	M/s. Anaimedu Sewage Treatment Plant	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013

b. Solid Waste Management

Salem City Integrated Waste Management Co PVT LTD located at S.F.No. 6/2, Chettichavadi Village, Salem Taluk, Salem District has obtained consent to operate for Collection, Segregation, Treatment and Disposal of Municipal Solid Waste – 350 MTPD vide Procs. No. T7/TNPCB/F.36307/SLM/RL/W&A/2013, Dt. 22.08.2013. with validity upto 31.03.2014. Salem Corporation has proposed to install approx 15 decentralized micro composting units across city to manage the Solid Waste generated.



14.0 Status of installation and operation status of Online Continuous Effluent Monitoring Systems (OCEMS)

Name and Address of the Unit	Flow meter
Arthanari Loom Centre (Textile) Pvt. Ltd. 5/127, Erumapalayam Main Road, Erumapalayam, Salem-636015.	ETP-I 1) Collection Tank – 1 2) RO Permeate - 1 3) MEE Feed - 1 4) MEE Condensate-1 5) SEP Feed ETP-II 6) Collection Tank 2 7) RO Permeate –2 8) MEE Feed – 2 9) MEE Condensate–2 10) ATFD Feed

15.0 Findings on the compliance of the Effluent /Sewage discharge norms by the industries.

The Report of analysis of the treated trade effluent samples collected from the M/s. The Salem District Co op Milk Producer Society Thalavaipatty Village, Salem West Taluk, Salem District reveals that the unit achieves the standards prescribed by the Board.

The Report of analysis of the treated sewage samples collected from the M/s. Steel Authority of India, Maaramangalathupatty Village, Salem West Taluk, Salem District reveals that the unit achieves the standards prescribed by the Board.

The Report of analysis of the treated sewage samples collected from the M/s. Vellakuttai Sewage Treatment Plant, Ammapet Village, Salem Taluk, Salem District reveals that the unit achieves the standards prescribed by the Board.

There is no discharge of effluent into the River Thirumanimutharu. However, stringent action is being taken against the authorized and unauthorized units discharge of untreated textile, dyeing effluent into the Municipal Drain or Odai which confluences with the River Thirumanimutharu.

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16.0 General observations and recommendations of the inspection team

It is recommended that the Salem City Corporation shall complete the establishment of the under-ground sewerage scheme within the time frame as furnished in the Action plan and shall ensure that the entire sewage generated from the corporation area is treated in the STPs.

17.0 Recommendations- Action plan for the River stretch

Proposed Short Term and Long Term Action Plan for Rejuvenation of River Thirumanimutharu:

Sl. No.	Description of Source	Action Plan for Rejuvenation of River Thirumanimutharu	Organisation/ Agency Responsible for Execution of the Action Plan	Time Target
1	Industrial Pollution Control	No industrial discharge	TNPCB	-
2	Sewage Treatment and Disposal plan	❖ **Salem Corporation** • No. of sewage outfall identified: 8 Nos. • Population: 913188 • Qty of Sewage generated: 100.03 MLD • Status of UGSS: Under Construction • Status of STP: Presently the Salem Corporation has provided 4 Nos of STPs. • **Plan of Action:** • To treat the waste water, the implementation of Under Ground Sewerage scheme work was taken up and is	Municipal Administration	

		under implementation at an estimated cost of Rs.149.39 crore with 4 nos. of STPs with a total capacity of 98.00 MLD and it will be completed by December 2019(Except Package-2). • Package-2 work will be completed on December 2020. • As on date, out of 40000 connections, 2530 no. of Houses service connections were effected and the remaining connections will be effected before December 2019. • After the completion of this scheme work, Outfalls in the River Thirumanimutharu will be stopped permanently.		Dec-2019 Dec-2020 Dec-2019
		❖ **Papparapatti Village Panchayat** • No. of sewage outfall identified: Nil • Population: 9020 • Qty of Sewage generated: 0.72 MLD • Status of UGSS: Not Provided • Status of STP: Not provided • Present Mode of Disposal: • Some of the households having individual toilets & soak pits.	Rural Development & Panchayat Raj	

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		• **Plan of Action:** Now for the remaining households individual & community soak pits are proposed under MGNREGS 2019-2020, 2020-2021. After construction of soak pits no waste water will be disposed into the river.		Oct-2019
3	Solid Waste Management and Disposal Plan	❖ **Salem Corporation** • No. of MSW dumping points identified: 7 • Population: 913188 • Qty of MSW Generated: Wet waste: 215 TPD Dry waste: 155 TPD Total: 370 TPD MSW Collection – 100% MSW Segregation – 74% Present Treatment Method: Wet waste: Bio-methanation-2Nos – 8 TPD Dry waste: • Saleable waste - 93 TPD • The Non-Biodegradable waste - 47 TPD - stored in the RRC at all MCCs. • Inert &Silt - 15 TPD stored with C&D waste for land filling. **Proposed Plan of Action:** 1. Micro Composting Plant – 30 Nos. of 150 TPD	Municipal Administration	100% Segregation will be achieved before 30.06.2019. April 2019

		(Will be completed before April 2019 SBM Funds and 2. Additional 10 Nos MCC of 50 TPD will be established before October 2019 utilizing Corporation Revenue fund 3. On – Site Composting – 86 locations – 20 TPD (Will be completed before April 2019)		Oct- 2019 April 2019
		❖ **Papparapatti Village Panchayat** • No. of MSW dumping points identified: Nil • Population: 9020 • Qty of MSW Generated: 1.0 TPD Source Collection & Segregation – Yes Treatment method: ➢ **Bio-Degradable Waste:** Dumped in the compost pits and cow dung are being sprayed at regular intervals and it becomes manure after 30 days and sold to the farmers. ➢ **Non Bio – Degradable Waste:** Segregated glass, Plastic bottles, Covers, Iron,	Rural Development & Panchayat Raj	-

		Aluminium foil sheets etc. once in 15 days and sold to the local merchants/Vendor or farmers.		
4	Ground Water Quality	Generally the ground water quality is poor – Manganese, Nickel and Sulphate level are above the prescribed standards.	State Ground Water Authority, CGWB	-
5	Flood Plain Zone (FPZ)	Identification of Flood Plain Zone areas has been completed in co-ordination with Revenue Department. Plantation & Bio-diversity parks will be formed after demarcation of FPZ.	PWD-WRD, Forest Department	-
6	Environmental Flow (E-flow) and Irrigation Practices	Awareness has been created among the farmers regarding effective utilization of water and to adopt drip irrigation in the Ayacut area.	PWD-WRD and Irrigation Department	-
7	Encroachments along the river bank	Demarcation of Encroachments identified with the help of revenue department. Notice has been issued and 30 nos of encroachments has been evicted in River Thirumanimutharu.	PWD-WRD and Revenue Department	-

18.0 Conclusion:

River Thirumanimutharu is categorised as polluted river stretch under priority-I. The report of analysis of the River Water collected at various locations reveals that the D.O is very less and BOD is very high and it shows the presence of high level of Fecal Coliforms and this indicates that the River gets contaminated due to sewage discharge. The quality of River water can be improved with the following measures;

- ✓ Salem Corporation shall complete the establishment of the under-ground sewerage scheme within the time frame as furnished in the action plan and shall ensure that the entire sewage generated from the corporation area is treated in the STPs.
- ✓ Salem Corporation shall complete the establishment of the solid waste treatment facility within the time frame and shall ensure that the entire solid waste generated from the local body area including solid waste dumped along the River Bank is treated and disposed off scientifically.
- ✓ TNPCB shall ensure that there is no discharge of untreated trade effluent from the textile Bleaching and Dyeing units at any point of time.
- ✓ TNPCB shall ensure that there is no operation of the illegal or unauthorized Textile Bleaching and Dyeing units.

Annexure - I

Details of Industries along the polluted river stretch

Sl.No	Taluk	Village	Industry Name	Consent validity	Trade effluent quantity in KLD	Disposal
1	SALEM	ACHANGUTTAIPATTI PUDUR	KRISHNA HOSPITAL	31/3/2020	0.2	Public sewer
2	SALEM	ACHANGUTTAPATTI	MANI SAGO FACTORY	31/3/2020	100	On land for irrigation
3	SALEM	ADIKARAPATTI	COLOGENESIS HEALTH CARE PVT LTD	31/3/2019	0.1	On land for irrigation
4	SALEM	ADIKARAPATTI	THANGAM PACKAGING INDUSTRIES SALE	31/3/2018	0.1	On land for irrigation
5	SALEM	AMMAPALAYAM	RANI AND CO	31/3/2022	25	On land for irrigation
6	SALEM	AMMAPALAYAM	DHIVYAM LIFE CARE NURSING HOME	05/04/2017 CTE Only	0.4	10% hypochloride
7	SALEM	AMMAPETTAI	SAMBANDAM SPINNING MILLS Ltd UNIT-I	31/3/2019	5	On land for irrigation
8	SALEM	AMMAPETTAI	SHAH CHUNILAL KUNDANMAL YARN PVT LTD	31/3/2021	85	Recycling to Process
9	SALEM	AMMAPETTAI	M.R.P. DYEING	31/3/2018	55	Recycling to Process
10	SALEM	AMMAPETTAI	SRI VENKATESA DYERS	31/10/1999	150	Recycling to Process
11	SALEM	AMMAPETTAI	SWAMY PROCESS	31/3/2020	255	Recycling to Process
12	SALEM	AMMAPETTAI	SRI SARASWATHI DYEING WORKS	31/3/2021	77	Recycling to Process
13	SALEM	AMMAPETTAI	MOHAN DYEING WORKS	31/3/2020	75.8	Recycling to Process
14	SALEM	AMMAPETTAI	SREE MOOKAMBIGAI DYERS	31/3/2019	81	Recycling to Process
15	SALEM	AMMAPETTAI	SRI KARPAGA VINAYAKAR DYEING	31/3/2020	23	Inland Surface Water
16	SALEM	AMMAPETTAI	AMMAN BLEACHERS	31/3/2023	25	Recycling to Process
17	SALEM	AMMAPETTAI	A.P.THANGAVELU BLEACHING	31/3/2018	10	Recycling to Process
18	SALEM	AMMAPETTAI	E.A.R. RANGANATHER BLEACHERS	31/3/2015	10	Recycling to Process
19	SALEM	AMMAPETTAI	M. PALANIAPPAN BLEACHERS	31/3/2020	10	Recycling to Process
20	SALEM	AMMAPETTAI	K.C.BLEACHING	31/3/2015	15	Recycling to Process
21	SALEM	AMMAPETTAI	SMR BLEACHING	CTE alone	75.5	Recycling to Process
22	SALEM	AMMAPETTAI	Anjeneyaa Bleacher	CTE alone	15	Recycling to Process
23	SALEM	AMMAPETTAI	PALANIYANDI MUDALIYAR MEMORIAL HOSPITAL	31/3/2019	7	On land for irrigation
24	SALEM	AMMAPETTAI	MODERN HOSPITAL	31/3/2019	5	Public sewer
25	SALEM	AMMAPETTAI	T.K.P.HOSPITAL	31/3/2018	4	Public sewer
26	SALEM	AMMAPETTAI	MOHANRAJ CHILDRENS HOSPITAL	31/3/2018	4	Public sewer
27	SALEM	AMMAPETTAI	BALAJI HOSPITAL	31/3/2019	1.4	Public sewer
28	SALEM	AMMAPETTAI	KAMALA HOSPITAL	31/3/2019	6	Public sewer
29	SALEM	AMMAPETTAI	SARATHAS NURSING HOME	31/3/2018	2.6	Public sewer
30	SALEM	AMMAPETTAI	GURUWOMEN AND CHILDREN HOSPITAL	31/3/2018	4	Public sewer

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Annexure-I Details of Industries along the polluted river stretch

31	SALEM	AMMAPETTAI	UDAYA NURSING HOME	31/3/2019	0.2	Public sewer
32	SALEM	AMMAPETTAI	SRI BALAJI HOSPITAL	31/3/2018	0.2	Public sewer
33	SALEM	AMMAPETTAI	P.K.S. HOSPITAL	31/3/2019	0.2	Public sewer
34	SALEM	AMMAPETTAI	RAJAMMAL HOSPITAL	31/3/2020	0.1	Public sewer
35	SALEM	AMMAPETTAI	SHRI SURAKKSHA SPECIALITY MEDICAL CENTRE	31/3/2019	0.5	Public sewer
36	SALEM	AMMAPETTAI	Dr NALINI SRIDHAR HOSPITAL	31/3/2018	0.5	Public sewer
37	SALEM	ATTAYAMPATTI	KURINJI SUPER SPECIALITIES HOSPITAL LTD	31/3/2020	5	Public sewer
38	SALEM	AYYAMPERUMALPATTI	SRI PACHIAMMAN SAGO FACTORY	31/3/2027	40	On land for irrigation
39	SALEM	ERUMAPALAIYAM	ARTHANARI LOOM CENTER TEXTILE PVT LTD	31/3/2022	2200	Recycling to Process
40	SALEM	ERUMAPALAIYAM	R.ARTHANARI CHETTIAR-DYEING	31/3/2019	108	Recycling to Process
41	SALEM	ERUMAPALAIYAM	R.K. DYEING	31/3/2022	225	Recycling to Process
42	SALEM	ERUMAPALAIYAM	AMMAN DYEINGS	31/3/2019	25.3	Inland Surface Water
43	SALEM	ERUMAPALAIYAM	SHRI MURUGAN EXPORT	31/3/2019	95	Recycling to Process
44	SALEM	ERUMAPALAIYAM	E.V.DYEING WORKS	31/3/2023	431	Recycling to Process
45	SALEM	ERUMAPALAIYAM	SRI RAGAVENDRA TEX	31/3/2018	30	Recycling to Process
46	SALEM	ERUMAPALAIYAM	DEEPAM DYEING	31/3/2019	50	Inland Surface Water
47	SALEM	ERUMAPALAIYAM	ARTHANARI EXPORTS	30/6/2015	25	Inland Surface Water
48	SALEM	ERUMAPALAIYAM	SRI JAYASAKTHI PROCESS	31/3/2024	0.05	On land for irrigation
49	SALEM	ERUMAPALAIYAM	BASUVA SANKAR DYEING	31/3/2003	100.8	Inland Surface Water
50	SALEM	ERUMAPALAIYAM	LORD KRISHNA COLOURS	CTE alone	37.5	CETP
51	SALEM	ERUMAPALAIYAM	SRI VINAYAKA COLOURS	CTE alone	39.5	CETP
52	SALEM	ERUMAPALAIYAM	AJANTHA DYEING	CTE alone	37.5	CETP
53	SALEM	ERUMAPALAIYAM	PALANIMURUGAN DYEING FACTORY	CTE alone	37.5	CETP
54	SALEM	ERUMAPALAIYAM	KAMALAM COLOURS	CTE alone	37.5	CETP
55	SALEM	ERUMAPALAIYAM	RAJAMMAL COLOURS	CTE alone	37.5	CETP
56	SALEM	ERUMAPALAIYAM	SRI BALASUBRAMANIA TEXTILES	CTE alone	37.5	CETP
57	SALEM	ERUMAPALAIYAM	RAMKUMAR DYEING	CTE alone	37.5	CETP
58	SALEM	ERUMAPALAIYAM	A.C.K. DYE HOUSE	CTE alone	37.5	CETP
59	SALEM	ERUMAPALAIYAM	ADHIKESAVAN DYEING FACTORY	CTE alone	37.5	CETP
60	SALEM	ERUMAPALAIYAM	SRI KARTHIKEYA DYERS	CTE alone	37.5	CETP
61	SALEM	ERUMAPALAIYAM	SRI SABARI DYEING FACTORY	CTE alone	37.5	CETP
62	SALEM	ERUMAPALAIYAM	VAMANA NARAYANA TEX	CTE alone	37.5	CETP
63	SALEM	ERUMAPALAIYAM	ARTHANARI CLOTHING PVT. LTD	31/3/2004	100	Recycling to Process
64	SALEM	ERUMAPALAIYAM	SALEM DYEING CENTRE	30/6/2015	50.2	Recycling to Process
65	SALEM	ERUMAPALAIYAM	SRI BALAJI DYEING WORKS	31/3/2021	43.9	Recycling to Process

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Annexure-I Details of Industries along the polluted river stretch

66	SALEM	GAJJALNAICKENPATTI	RATHINAM DYEING	31/3/2018	19.3	Recycling to Process
67	SALEM	HASTHAMPATTI	RUTHRAMOORTHY POLYCLINIC	31/3/2020	1.5	Public sewer
68	SALEM	HASTHAMPATTI	GANESAN HOSPITAL	31/3/2018	6	Public sewer
69	SALEM	HASTHAMPATTI	KIRUBHA HOSPITAL	31/3/2019	8	Public sewer
70	SALEM	HASTHAMPATTI	AMMANI HOSPITAL	31/3/2019	3.5	Public sewer
71	SALEM	HASTHAMPATTI	SUNDARAM SURGICAL CLINIC NURSING HOME	30/6/2010	3.5	Public sewer
72	SALEM	HASTHAMPATTI	SARASWATHY NURSING HOME	31/3/2018	8.6	Public sewer
73	SALEM	HASTHAMPATTI	LEELA MATERNITY SURGICAL NURSING HOME	31/3/1992	4.6	Public sewer
74	SALEM	HASTHAMPATTI	SALEM GOPI HOSPITALS PRIVATE LIMITED	31/3/2019	10	Public sewer
75	SALEM	HASTHAMPATTI	SHANKAR NURSING HOME	31/3/2019	2.6	Public sewer
76	SALEM	HASTHAMPATTI	SHANTHI NURSING HOME	31/3/2020	2.6	Public sewer
77	SALEM	HASTHAMPATTI	VIJAYA HOSPITAL	31/3/2018	4	Public sewer
78	SALEM	HASTHAMPATTI	KERRISON MEMORIAL HOSPITAL	31/3/2019	4.4	Public sewer
79	SALEM	HASTHAMPATTI	RAJESWARI MATERNITY SURGICAI NURSING HOM	30/6/2008	1.2	Public sewer
80	SALEM	HASTHAMPATTI	SRI RAAM HOSPITAL	30/6/2010	1	Public sewer
81	SALEM	HASTHAMPATTI	Dr. G. SOODAMANI HOSPITAL	31/3/2019	0.5	Public sewer
82	SALEM	HASTHAMPATTI	M.G. DIABETES SPECIALITY AND RESEARCH	31/3/2018	0.5	Public sewer
83	SALEM	HASTHAMPATTI	SALEM MEDICAL CENTRE HOSPITAL PVT. LTD	31/3/2020	0.1	Public sewer
84	SALEM	HASTHAMPATTI	JAYA NURSING HOME	31/3/2018	1	Public sewer
85	SALEM	HASTHAMPATTI	SITHI VINAYAGAR BLOOD BANK	31/3/2018	0.25	Public sewer
86	SALEM	HASTHAMPATTI	VENKATAKRISHNAN NURSING HOME	31/3/2018	0.5	Public sewer
87	SALEM	HASTHAMPATTI	K.R. MEDICAL CENTRE	31/3/2018	0.5	Public sewer
88	SALEM	HASTHAMPATTI	P.R.N.HOSPITAL	31/3/2020	0.2	Public sewer
89	SALEM	HASTHAMPATTI	ANKUR HEALTH CARE PRIVATE LIMITED	31/3/2018	0.5	Public sewer
90	SALEM	KANNANKURICHI	SRI NATARAJA SAGO FACTORY	31/3/1992	12.5	On land for irrigation
91	SALEM	KONDAMANAYAKKANPATTI	SHARON CANCER CENTRE AND GENERAL HOSPITA	31/3/2026	0.1	Public sewer
92	SALEM	KUMARASWAMIPATTI	C.K.R.HOSPITAL	31/3/2019	4	Public sewer
93	SALEM	KUMARASWAMIPATTI	APPUSAMY HOSPITAL	31/3/2019	0.25	Public sewer
94	SALEM	KUMARASWAMIPATTI	RISHI NETHRALAYA EYE AND ENT HOSPITAL	31/3/2022	1	Public sewer
95	SALEM	KUMARASWAMIPATTI	SIMS CHELLUM HOSPITAL	31/3/2022	1.5	Public sewer
96	SALEM	KUPPANUR	JAYAMURUGAN TEXTILES	31/3/1994	0.3	On land for irrigation
97	SALEM	MALLUR	SREE JAYAM ORTHO AND MULTISPECIALITY HOS	31/3/2024	0.5	Public sewer
98	SALEM	MALLUR	KATHIRAVAN SAGO FACTORY	31/3/2020	200	On land for irrigation
99	SALEM	PALAPATTI	MARIYAPPAN NURSING HOME	31/3/2019	3.4	Public sewer
100	SALEM	PALAPATTI	SALEM POLY CLINIC	31/3/2019	14	Public sewer

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Annexure-I Details of Industries along the polluted river stretch

101	SALEM	PANAMARATHUPATTY	LAKSHMI DYEING	31/3/2000	5.1	On land for irrigation
102	SALEM	PANAMARATHUPATTY	SHANMUGAVEL STARCH INDUSTRIES	Not in operaton	12	On land for irrigation
103	SALEM	PANAMARATHUPATTY	SRI PATCHI AMMAN SAGO FACTORY	31/3/2021	100	On land for irrigation
104	SALEM	PANAMARATHUPATTY	THILLAIKARASI SAGO FACTORY	31/3/2026	190	On land for irrigation
105	SALEM	PANAMARATHUPATTY	GANESA SAGO FACTORY KALAI SELVI and CO	31/3/2023	75	Inland Surface Water
106	SALEM	PANAMARATHUPATTY	SRI AMMAN SAGO PRODUCTS	31/3/209	100	On land for irrigation
107	SALEM	PANAMARATHUPATTY	VENKATESWARA AND CO	31/3/2021	50	On land for irrigation
108	SALEM	SALEM	DR SUNDARARAJAN NEURO HOSPITAL PVT LTD	31/3/2018	1	On land for irrigation
109	SALEM	SALEM	VETRIVEL MATERNITY AND CHILDRENS HOSPITA	31/3/2019	0.7	Public sewer
110	SALEM	SALEM TOWN	SARAVANA HOSPITAL P LTD	31/3/2019	1	Public sewer
111	SALEM	SALEM TOWN	GOVT MOHAN KUMARAMANGALAM MEDICAL	31/3/2017	5	On land for irrigation
112	SALEM	SALEM TOWN	NAGARAJAN NURSING HOME	31/3/2028	4	Public sewer
113	SALEM	SALEM TOWN	MARUTHI HOSPITAL	31/3/2027	0.5	Public sewer
114	SALEM	SALEM TOWN	VIDYA NURSING HOME	31/3/2018	0.2	Public sewer
115	SALEM	SALEM TOWN	SHANMUGA HOSPITAL	31/3/2019	2	Public sewer
116	SALEM	SALEM TOWN	J.S.HOSPITAL	31/3/2020	1.2	Public sewer
117	SALEM	SALEM TOWN	DEVI HOSPITAL	31/3/2018	0.2	Public sewer
118	SALEM	SALEM TOWN	SHRI SHELLAPHA HOSPITAL	31/3/2021	0.5	Public sewer
119	SALEM	SALEM TOWN	SELVI HOSPITAL	31/3/2018	0.1	Public sewer
120	SALEM	SALEM TOWN	K.M.NATRAJ S NURSING HOME	31/3/2022	0.3	Public sewer
121	SALEM	SALEM TOWN	DR.THIRU NEURO MULTISPECIALTY HOSPITAL	31/3/2018	0.5	Public sewer
122	SALEM	SALEM TOWN	NITHISH G.E.SPECIALITY HOSPITAL	31/3/2019	1	Public sewer
123	SALEM	SALEM TOWN	SUHAM TRUST HOSPITAL	31/3/2019	0.5	Public sewer
124	SALEM	SALEM TOWN	PUSHPAM HOSPITAL	31/3/2020	0.5	Public sewer
125	SALEM	SALEM TOWN	REVATHI HOSPITAL	31/3/2028	0.5	Public sewer
126	SALEM	SALEM TOWN	LONDON ORTHO SPECIALITY HOSPITAL	31/3/2026	1	Public sewer
127	SALEM	SALEM TOWN	SRI VELAVAN SAGO INDUSTRIES	31/3/2028	100	On land for irrigation
128	SALEM	SANDIYUR	SRI ALAGUNACHIYAMMAN SAGO FACTORY	CTE alone	40	On land for irrigation
129	SALEM	SANDIYUR	ARULMURUGAN SAGO FACTORY	31/3/2018	40	On land for irrigation
130	SALEM	SANDIYUR	SRI BALAGANAPATHY SAGO FACTORY	31/3/2018	60	On land for irrigation
131	SALEM	SANDIYUR	ARULMURUGAN SAGO FACTORY	31/3/2018	100	On land for irrigation
132	SALEM	SANDIYUR	SRI ANNAMAAR SAGO FACTORY	31/3/2021	35	On land for irrigation
133	SALEM	SANDIYUR ATTAYAMPATTI	MURUGA BOOPATHI STARCH INDUSTRIES	31/3/2018	9	On land for irrigation
134	SALEM	SEELANICKENPATTI	KAUVERY HOSPITAL	31/3/2019	1	Public sewer
135	SALEM	SUKKAMPATTI	SRI VENKATESWARA SAGO INDUSTRIES	31/3/2019	30	On land for irrigation

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Annexure-I Details of Industries along the polluted river stretch

136	SALEM	THIPPAMPATTI	MEENATCHI AMMAN SAGO FACTORY	31/3/2022	70	On land for irrigation
137	SALEM	THIPPAMPATTI	SRI GANESH SANKAR SAGO FACTORY	31/3/2018	100	On land for irrigation
138	SALEM	THIPPAMPATTI	SARASWATHI SAGO FACTORY	31/3/2021	75	On land for irrigation
139	SALEM	THIPPAMPATTI	V.R.K. SAGO FACTORY	31/3/2018	25	On land for irrigation
140	SALEM	THIPPAMPATTI	SENGOTTAIYA SAGO FACTORY	31/3/2028	100	On land for irrigation
141	SALEM	THIPPAMPATTI	VENKATACHALAPATHY SAGO FACTORY	31/3/2020	70	On land for irrigation
142	SALEM	VALASAIYUR	SRI VELMURUGAN INDUSTRIAL STARCH UNIT	31/3/1992	12.5	On land for irrigation
143	SALEM	VENGAMPATTI	MUTHU SAGO FACTORY	31/3/2026	200	On land for irrigation
144	SALEM SOUTH	A ANDIPATTI	SRI BHADRI NARAYANA TEXTILES DYEING	31/3/2021	50	Recycling to process
145	SALEM SOUTH	AMANI KONDALAMPATTI	LEADER PROCESS	31/3/2020	25.35	Recycling to process
146	SALEM SOUTH	AMANI KONDALAMPATTI	VIKRAM PROCESSORS	31/3/2019	150	Recycling to process
147	SALEM SOUTH	AMANI KONDALAMPATTI	Sri Andavar Bleaching	31/3/2021	162	Recycling to process
148	SALEM SOUTH	AMANI KONDALAMPATTI	UNITED TEXTILE PROCESSORS	31/3/2012	0.05	Solar Evaporation pan
149	SALEM SOUTH	AMANI KONDALAMPATTI	SRI VELMURUGAN SAGO INDUSTRIES	31/3/2019	28	Onland irrigation
150	SALEM SOUTH	AMANI KONDALAMPATTI	TARA DYERS	31/3/2019	150	Recycling to process
151	SALEM SOUTH	AMANI KONDALAMPATTI	APPU VENKATACHALAM MEDICAL RESEARCH CENT	31/3/2019	2.5	Public sewer
152	SALEM SOUTH	ANNADANAPATTI	SRI GAYATHRI BLEACHING AND WASHING	31/3/2020	241	Recycling to process
153	SALEM SOUTH	ANNADANAPATTI	SRI JEE YARNS	31/3/2019	8	Recycling to process
154	SALEM SOUTH	ANNADANAPATTI	MALA EXPORT FABRICS	31/3/2023	30	Recycling to process
155	SALEM SOUTH	ANNADANAPATTI	SUPREME TEX PROCESSORS	31/3/2019	32.25	Recycling to process
156	SALEM SOUTH	ANNADANAPATTI	SRI PRASANNA COLOURS	31/3/2018	16	Recycling to process
157	SALEM SOUTH	ANNADANAPATTI	BHUVANA DYERS	31/3/2021	11	Recycling to process
158	SALEM SOUTH	ANNADANAPATTI	SRI VENI DYEING	31/3/2019	11	Recycling to process
159	SALEM SOUTH	ANNADANAPATTI	GANESHA DYEING	31/3/2019	11	Recycling to process
160	SALEM SOUTH	ANNADANAPATTI	DHANALAKSHMI FABRICS	31/3/2022	300	Recycling to process
161	SALEM SOUTH	ANNADANAPATTI	SWAMY PROCESS	31/3/2020	200	Recycling to process
162	SALEM SOUTH	ANNADANAPATTI	SALEM CORPORATION SLAUGHTER HOUSE	31/3/2011	9	Onland irrigation
163	SALEM SOUTH	ANNADANAPATTI	RAMA GOUNDAR BLEACHING	31/3/2020	301	Recycling to process
164	SALEM SOUTH	ANNADANAPATTI	CAUVERY STONES IMPEX P LTD	31/3/2019	6.5	Recycling to process
165	SALEM SOUTH	ANNADANAPATTI	SONAL VYAPAR LIMITED	31/3/2027	2.5	Recycling to process
166	SALEM SOUTH	ANNADANAPATTI	ALLWIN TEXTILLE PROCESS	31/3/2018	100	Recycling to process
167	SALEM SOUTH	ANNADANAPATTI	THIRUMALAI TEX PROCES	31/3/2021	0.1	Onland irrigation
168	SALEM SOUTH	ANNADANAPATTI	SRI BHARATHY NURSING HOME	31/3/2022	0.2	Public sewer
169	SALEM SOUTH	ANNADANAPATTI	RAMADAS NURSING HOME	31/3/2020	2.5	Public sewer
170	SALEM SOUTH	ANNADANAPATTI	T.V.G. NURSING HOME	31/3/2019	0.2	Public sewer

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Annexure-I Details of Industries along the polluted river stretch

171	SALEM SOUTH	ANNADANAPATTI	RAMADAS SUKUMAR HOSPITAL	31/3/2020	0.2	Public sewer
172	SALEM SOUTH	ANNADANAPATTI	SRI SARASWATHI SAGO FACTORY	31/3/2021	77	Onland irrigation
173	SALEM SOUTH	ANNADANAPATTI	SRI JAYAKUMAR SAGO MANUFACTURERS	31/3/2023	150	Onland irrigation
174	SALEM SOUTH	ANNADANAPATTI	SRI SAKTHI VINAYAKA SAGO MANUFACTURES	31/3/2022	100	Onland irrigation
175	SALEM SOUTH	ANNADANAPATTI	VELMURUGAN TRADERS	31/3/2019	100	Onland irrigation
176	SALEM SOUTH	ANNADANAPATTI	MAHALAKSHMI SAGO FACTORY	31/3/2023	100	Onland irrigation
177	SALEM SOUTH	ANNADANAPATTI	HAIMAVATHI PROCESS	31/3/2020	100	Recycling to process
178	SALEM SOUTH	ANNADANAPATTI	KA.M.D.PROCESS	31/3/2027	0.05	Solar Evaporation pan
179	SALEM SOUTH	ANNADANAPATTI	RAJAMMA AGRO PRODUCTS	31/3/2025	0.8	Solar Evaporation pan
180	SALEM SOUTH	ATTAYAMPATTI	MALARVIZHI DYEING	31/3/2019	10	Recycling to process
181	SALEM SOUTH	ATTAYAMPATTI	P.A. KUPPUSAMY MUDALIYAR AND COMPANY	31/3/2019	5	Recycling to process
182	SALEM SOUTH	ATTAYAMPATTI	RAVIKUMAR FABRICS	31/3/2008	20	Recycling to process
183	SALEM SOUTH	ATTAYAMPATTI	MALLIGAI NURSING HOME	31/3/2019	1.5	Public sewer
184	SALEM SOUTH	ATTAYAMPATTI	SARASWATHI SAGO FACTORY	31/3/2021	30	Onland irrigation
185	SALEM SOUTH	ILAMPILLAI	ALAMELU DYEING	31/3/2019	50	Recycling to process
186	SALEM SOUTH	JARI KONDALAMPATTI	THAMBBI DELTAA DYEING PLANT	30/6/2013	78	Recycling to process
187	SALEM SOUTH	JARI KONDALAMPATTI	VINAYAGA DYEING	31/3/2019	10	Recycling to process
188	SALEM SOUTH	JARI KONDALAMPATTI	SRI RAJAGANAPATHY DYEING	31/3/2021	26	Recycling to process
189	SALEM SOUTH	JARI KONDALAMPATTI	S.S. DYERS	31/3/2021	26	Recycling to process
190	SALEM SOUTH	JARI KONDALAMPATTI	SASTHA DYEING	31/3/2021	26	Recycling to process
191	SALEM SOUTH	JARI KONDALAMPATTI	SRI RAM DYEING	31/3/2021	26	Recycling to process
192	SALEM SOUTH	JARI KONDALAMPATTI	N.S.DYEING	31/3/2018	30	Recycling to process
193	SALEM SOUTH	JARI KONDALAMPATTI	PRIYAM SPECIALITY HOSPITALS	31/3/2020	0.5	Public sewer
194	SALEM SOUTH	JARI KONDALAMPATTI	Universal cancer Hospital Ltd	31/3/2027	0.5	Public sewer
195	SALEM SOUTH	NEIKKARAPATTI	K.P.N. SAGO FACTORY	31/3/2019	150	Onland irrigation
196	SALEM SOUTH	NEIKKARAPATTI	SELVAM SAGO FACTORY	31/3/2019	100	Onland irrigation
197	SALEM SOUTH	NINAMPATTY	GOVERNMENT HOSPITAL-NAINAMPATTY	31/3/2027	1	Public sewer
198	SALEM SOUTH	PARAPPATTI	SRI KOMMAIAMMAN SAGO FACTORY	31/3/2019	60	Onland irrigation
199	SALEM SOUTH	PARAPPATTI	SRI SARAVANA SAGO FACTORY	31/3/2019	100	Onland irrigation
200	SALEM SOUTH	PERUMAKKAVUNDANPATTI	VPS DYEING	31/3/2020	50	Recycling to process
201	SALEM SOUTH	REDDIPATTI	G.T.P. GRANITES LTD	31/3/2019	75	Recycling to process
202	SALEM SOUTH	SILANAYAKKANPATTI	DHANDAPANI SPINNING MILLS LIMITED	31/3/2023	100	Onland irrigation
203	SALEM SOUTH	SILANAYAKKANPATTI	NAVAMANI DYEING FACTORY	31/3/2023	100	Recycling to process
204	SALEM SOUTH	SILANAYAKKANPATTI	SHRI KRISHNA DYEING WORKS	31/3/2023	305	Recycling to process
205	SALEM SOUTH	SILANAYAKKANPATTI	SHANMUGAM COLOURS	31/3/2020	40	Recycling to process

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Annexure-I Details of Industries along the polluted river stretch

206	SALEM SOUTH	SILANAYAKKANPATTI	S.K. CARS INDIA PVT LTD	31/3/2019	4	Onland irrigation
207	SALEM SOUTH	SILANAYAKKANPATTI	DHARAN HOSPITAL	31/3/2019	5	Public sewer
208	SALEM SOUTH	SILANAYAKKANPATTI	AKITHA HOSPITAL	31/3/2020	0.5	Public sewer
209	SALEM SOUTH	TADAGAPATTI	RAJ DYEING	31/3/2020	25.3	Recycling to process
210	SALEM SOUTH	TADAGAPATTI	GOWRISANKAR DYERS	31/3/2019	12.5	Recycling to process
211	SALEM SOUTH	TADAGAPATTI	NATARAJA SAYA SALAI	31/3/2019	25	Recycling to process
212	SALEM SOUTH	TADAGAPATTI	O.S. RAMALINGAM AND CO DYEING FACTORY	31/3/2020	16	Recycling to process
213	SALEM SOUTH	TADAGAPATTI	GURU RAGAVENDARA TEXTILES	31/3/2019	200	Recycling to process
214	SALEM SOUTH	TADAGAPATTI	SRI BALAJI TEXTILES PROCESSING UNIT	31/3/2021	30	Recycling to process
215	SALEM SOUTH	TADAGAPATTI	SENTHIL DYEING	31/3/2019	10.2	Recycling to process
216	SALEM SOUTH	TADAGAPATTI	POORANI SAYA SALAI	31/3/2019	125	Recycling to process
217	SALEM SOUTH	TADAGAPATTI	LAKSHMI DYEINGS	31/3/2019	25.5	Recycling to process
218	SALEM SOUTH	TADAGAPATTI	VENKATESA DYERS	31/3/2021	25	Recycling to process
219	SALEM SOUTH	TADAGAPATTI	VENKATESA DYEING CENTRE	31/3/2021	25	Recycling to process
220	SALEM SOUTH	TADAGAPATTI	LAKSHMI DYEING	31/3/2023	25	Recycling to process
221	SALEM SOUTH	TADAGAPATTI	LALITHA COLOURS	31/3/2020	25	Recycling to process
222	SALEM SOUTH	TADAGAPATTI	SALEM DYEING CENTRE	31/3/2015	55	Recycling to process
223	SALEM SOUTH	TADAGAPATTI	BHARATHI DYEING	31/3/2019	25.3	Recycling to process
224	SALEM SOUTH	TADAGAPATTI	A.T.K. COLOURING CENTRE	31/3/2019	10.8	Recycling to process
225	SALEM SOUTH	TADAGAPATTI	ANNAMALAI SAYA SALAI	31/3/2019	150	Recycling to process
226	SALEM SOUTH	TADAGAPATTI	SLAUGHTER HOUSE FOR GOAT AND SHEEP	31/3/2015	2.4	Public sewer
227	SALEM SOUTH	TADAGAPATTI	SOUNDARARAJAN NURSING HOME	30/6/2015	2	Public sewer
228	SALEM SOUTH	TADAGAPATTI	G.V.K. HOSPITAL	31/3/2019	4	Public sewer
229	SALEM SOUTH	TADAGAPATTI	SHANTHI NURSING HOME	31/3/2020	2.6	Public sewer
230	SALEM SOUTH	TADAGAPATTI	SREE VASANTHAM HOSPITAL	31/3/2019	0.05	Public sewer
231	SALEM SOUTH	TADAGAPATTI	ANBU NURSING HOME	31/3/2021	0.2	Public sewer
232	SALEM SOUTH	TADAGAPATTI	LATHA YUVARAJ HOSPITAL	31/3/2027	0.1	Public sewer
233	SALEM SOUTH	TADAGAPATTI	PARTHIBA TRADERS	31/3/2019	100	Onland irrigation
234	SALEM SOUTH	TADAGAPATTI	MEENAKSHI INDIA LTD	31/3/2021	10	Onland irrigation
235	SALEM SOUTH	TADAGAPATTI	SRI LAKSHMI NARAYANA NURSING HOME	31/3/2027	0.01	Public sewer
236	SALEM SOUTH	TADAGAPATTI	LIFE CARE HOSPITAL	31/3/2023	0.36	Public sewer
237	SALEM SOUTH	VANIYAMBADI	VIJAYA SAGO FACTORY	31/3/2023	70	Onland irrigation
238	SALEM SOUTH	VEMBADITALAM	DHIVYA FASHIONS	31/3/2019	50	Recycling to process
239	SALEM SOUTH	VEMBADITALAM	SRI DURGA DYEING	31/3/2019	50	Recycling to process
240	SALEM SOUTH	VEMBADITALAM	GOVERNMENT HOSPITAL-VEMBADITHALAM	31/3/2027	2.5	Public sewer

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Annexure-I Details of Industries along the polluted river stretch

241	SALEM WEST	ALAGAPURAM	G.T.P. MARBLES AND GRANITES	31/3/2019	1	Recycling to process
242	SALEM WEST	ALAGAPURAM	BHAVANI HOSPITAL	31/3/2019	2	Public sewer
243	SALEM WEST	ALAGAPURAM	S.K.S. HOSPITAL	31/3/2026	5	Public sewer
244	SALEM WEST	ALAGAPURAM	RAINBOW HOSPITAL	31/3/2019	0.5	Public sewer
245	SALEM WEST	ALAGAPURAM	ARUNAGIRI ENT NURSING HOME	31/3/2019	0.02	Public sewer
246	SALEM WEST	ALAGAPURAM	DR. PAULOSE DENTAL CLINIC	31/3/2018	0.05	Public sewer
247	SALEM WEST	ALAGAPURAM	NATHAN SUPER SPECIALITY HOSPITAL	31/3/2025	1	Public sewer
248	SALEM WEST	ALAGAPURAM	T.V.SUNDRAM IYENGER and SONS	31/3/2019	6	Recycling to process
249	SALEM WEST	ALAGAPURAM	EKA HOSPITAL	31/3/2027	0.8	Public sewer
250	SALEM WEST	ALAGAPURAM	THE BANGALORE AUTOMOBILES AGENCY DIVISIO	31/3/2019	1.8	Public sewer
251	SALEM WEST	ALAGAPURAM	THILLAIKARASI SAGO FACTORY	31/3/2019	100	On land for irrigation
252	SALEM WEST	ALAGAPURAM	HOTEL CENNEYS GATEWAY	31/3/2028	2.5	On land for irrigation
253	SALEM WEST	ALAGAPURAM	PRANAV HOSPITAL PVT LTD	31/3/2019	1	Public sewer
254	SALEM WEST	ALAGAPURAM	SS MEDICAL CENTRE	31/3/2019	0.2	Public sewer
255	SALEM WEST	ALAGAPURAM	Dr SUDHAKAR ENT CARE CENTRE	31/3/2021	0.2	Public sewer
256	SALEM WEST	ALAGAPURAM	LOTUS EYE HOSPITAL AND INSTITUTE	31/3/2020	1.2	Public sewer
257	SALEM WEST	ALAGAPURAM	SKS HOSPITAL LABORATORY AND SKS HOSPITAL	31/3/2027	0.5	Public sewer
258	SALEM WEST	ALAGAPURAM PUDUR	GLOBAL LAB AND CONSULTANCY SERVICES	31/3/2019	0.36	Recycling to process
259	SALEM WEST	ALAGAPURAM PUDUR	VASAN DENTAL CARE HOSPITAL PVT LTD	30/6/2016	0.5	Public sewer
260	SALEM WEST	ALAGAPURAM PUDUR	THAMBI MEDICAL SURGICAL EYE HOSPITAL P L	31/3/2020	0.9	Public sewer
261	SALEM WEST	AMMAPALAYAM	S SEVEN CARS INDIA PRIVATE LIMITED	31/3/2026	4	Recycling to process
262	SALEM WEST	BODINAYAKANPATTI	AISHWARYAM SPECIALITY HOSPITAL P LTD	31/3/2020	1.5	Public sewer
263	SALEM WEST	BODINAYAKANPATTI	THRIVENI CAR COMPANY	31/3/2023	5	Recycling to process
264	SALEM WEST	JAGIR AMMAPALAYAM	RATHNA KAMATCHI SAGO FACTORY	31/3/2018	75	On land for irrigation
265	SALEM WEST	JAGIR AMMAPALAYAM	SIVASAKTHI HOTELS P LTD	31/3/2022	6	On land for irrigation
266	SALEM WEST	JAGIR AMMAPALAYAM	GLOBAL MEDICAL CENTRE	31/3/2020	0.2	Public sewer
267	SALEM WEST	JAGIR AMMAPALAYAM	PONNI SAGO FACTORY	31/9/2002	100	On land for irrigation
268	SALEM WEST	JAGIR AMMAPALAYAM	T.A. PERUMAL STARCH INDUSTRIES	31/3/2019	100	On land for irrigation
269	SALEM WEST	JAGIR AMMAPALAYAM	S.K.S.AUTOMOBILES	31/3/2026	4	Recycling to process
270	SALEM WEST	KANDAMPATTI	SRI MURUGAN SAGO FACTORY	31/3/2022	100	On land for irrigation
271	SALEM WEST	KANDAMPATTI	SUDAMANI STARCH INDUSTRIES	31/3/2019	50	On land for irrigation
272	SALEM WEST	KANDAMPATTI	SREE DHANAALAKSHMI PROCESS	31/3/2022	200	Recycling to process
273	SALEM WEST	KANDAMPATTI	FRIENDS DYEING	31/3/2021	200	Recycling to process
274	SALEM WEST	KANDAMPATTI	SISU HOSPITAL	31/3/2022	0.2	Public sewer
275	SALEM WEST	KANDAMPATTI	SRI BALAMURUGAN SAGO FACTORY	31/6/2016	75	On land for irrigation

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Annexure-I Details of Industries along the polluted river stretch

276	SALEM WEST	KANDAMPATTI	SRI VELMURUGAN STARCH FACTORY	31/3/2018	150	On land for irrigation
277	SALEM WEST	KANDAMPATTI	SRI VENKATESWARA SAGO FACTORY	31/3/1992	105	On land for irrigation
278	SALEM WEST	KANDAMPATTI	SREE SAKTHI SAGO FACTORY	31/3/2022	150	On land for irrigation
279	SALEM WEST	KANDAMPATTI	ARULMURUGAN SAGO FACTORY	31/3/2022	100	On land for irrigation
280	SALEM WEST	KANDAMPATTI	SIVAMURUGAN SAGO FACTORY	31/3/2019	100	On land for irrigation
281	SALEM WEST	KANDAMPATTI	SRI ANNAMAR SAGO FACTORY	31/3/2020	100	On land for irrigation
282	SALEM WEST	KANDAMPATTI	ANBU TAPIOCA STARCH MILLS	31/3/1996	97	On land for irrigation
283	SALEM WEST	KANDAMPATTI	SRI CHENNI ANDAVAR SAGO FACTORY	31/3/2012	50	On land for irrigation
284	SALEM WEST	KANDAMPATTI	DHANDAYUTHAPANI SAGO TRADERS	31/3/2021	50	On land for irrigation
285	SALEM WEST	KANDAMPATTI	SRI MURUGAN SAGO FACTORY	31/3/2022	100	On land for irrigation
286	SALEM WEST	KANDAMPATTI	PALANIAPPA GOUNDER SAGO FACTORY	31/3/2022	75	On land for irrigation
287	SALEM WEST	KANDAMPATTI	LRN AUTO AGENCIES PRIVATE LIMITED	31/3/2016	5	On land for irrigation
288	SALEM WEST	KANDAMPATTI	LRN MOTORS PRIVATE LIMITED	31/3/2016	5	On land for irrigation
289	SALEM WEST	KANDAMPATTI	SELVI STARCH INDUSTRIES	31/3/2019	12.5	On land for irrigation
290	SALEM WEST	MALLAMUPPANPATTI	JAYALAKSHMI STARCH INDUSTRIES	31/3/2019	70	On land for irrigation
291	SALEM WEST	MARAMANGALATTUPATTI	STEEL AUTHORITY OF INDIA HOSPITAL	31/3/2020	3	Public sewer
292	SALEM WEST	MEYYANOOR	CJ PALLAZZIO HOTEL	31/3/2022	5	Recycling to process
293	SALEM WEST	MEYYANUR	RELIANCE PROLIFIC TRADERS PVT LTD	31/3/2016	12	Recycling to process
294	SALEM WEST	MEYYANUR	SRI GOKULAM HOSPITAL PVT LTD	31/3/2020	1.5	Public sewer
295	SALEM WEST	MEYYANUR	SRI GOKULAM SPECIALITY HOSPITAL	31/3/2019	1.5	Public sewer
296	SALEM WEST	MEYYANUR	VENKATESH HOSPITALAND URALOGY CENTRE	31/3/2019	1.8	Public sewer
297	SALEM WEST	MEYYANUR	SIVARAJ HOLIDAY INN PVT LTD	31/3/2019	3	On land for irrigation
298	SALEM WEST	MEYYANUR	SITHESWARA SAGO FACTORY	31/3/2018	12.5	On land for irrigation
299	SALEM WEST	MEYYANUR	ASHOK AUTO AGENCY	31/3/2027	1	Public sewer
300	SALEM WEST	MEYYANUR	TNSTC LTD DIVISION -I Meyyanur Branc	31/3/2019	2	On land for irrigation
301	SALEM WEST	NALLAMPATTI	STEEL AUTHORITY OF INDIA	31/3/2019	6168	Recycling to process
302	SALEM WEST	NARASOJIPATTI	RAMANI CARS PVT LTD	31/3/2019	5	Recycling to process
303	SALEM WEST	NARASOJIPATTI	PRATHIBA SAGO FACTORY	31/3/2019	200	On land for irrigation
304	SALEM WEST	PALLAPATTI	ALLWIN PROCESS	31/3/2016	100	Recycling to process
305	SALEM WEST	PALLAPATTI	St MARYS HOSPITAL	31/3/2020	1.8	Public sewer
306	SALEM WEST	PALLAPATTI	AROKYA HOSPITAL	31/3/2018	0.5	Public sewer
307	SALEM WEST	PALLAPATTI	SRI SELLAKUMAR SAGO MANUFACTURES	31/3/1992	25	On land for irrigation
308	SALEM WEST	PALLAPATTI	RAJA SAGO FACTORY	31/3/2020	195	On land for irrigation
309	SALEM WEST	PALLAPATTI	SRINIVASA SAGO FACTORY	31/3/2019	100	On land for irrigation
310	SALEM WEST	PALLAPATTI	ESWARAN STARCH MILL	31/3/2000	100	On land for irrigation

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Annexure-I Details of Industries along the polluted river stretch

311	SALEM WEST	PALLAPATTI	SRI VINAYAGAR SAGO FACTORY	30/9/2003	100	On land for irrigation
312	SALEM WEST	PALLAPATTI	SRI RAGAVENDHRA NEURO CARE P LTD	31/3/2019	1	Public sewer
313	SALEM WEST	PUTHUR,AGRAHARAM	SRI RAJAGANAPATHI SAGO FACTORY	30/9/2002	40	On land for irrigation
314	SALEM WEST	REDDIYUR	ESWARAN BLEACHING	31/3/2019	102	Recycling to process
315	SALEM WEST	SARKAR GOLLAPPATTI	GOVERNMENTAL HOSPITAL-PETHANAICKENPALAYA	31/3/2027	0.5	Public sewer
316	SALEM WEST	SITTANUR GOLLAPATTI	THE SALEM DISTRICT CO-OP MILK PRODUCERS	31/3/2017	580	On land for irrigation
317	SALEM WEST	SOUDAPURAM	SENTHIL MURUGAN STARCH FACTORY	31/3/1992	12	On land for irrigation
318	SALEM WEST	SURAMANGALAM	M.J. HOSPITAL	31/3/2019	3.2	Public sewer
319	VAZHAPPADI	AGRAHARA VALAPPADI	MALAR NURSING HOME	CTE alone	0.5	Public sewer
320	VAZHAPPADI	AYODHYAPATTIANAM	JAI LAKSHMI NURSING HOME	31/3/2019	0.1	Public sewer
321	VAZHAPPADI	AYODHYAPATTIANAM	SRI BALAJI SAGO FACTORY	31/3/2022	75	On land for irrigation
322	VAZHAPPADI	AYODHYAPATTIANAM	SALEM SRI VENKATRAMANA SAGO FACTORY	NOP	0	No Trade Effluent
323	VAZHAPPADI	AYOTHIAPATTANAM	SELVA VINAYAKA SAGO FACTORY	31/3/2022	70	On land for irrigation
324	VAZHAPPADI	CHINNAKAVUNDAPURAM	HATSUN AGRO PRODUCT LTD MILK PRODUCT	31/3/2017	10	On land for irrigation
325	VAZHAPPADI	CHINNAKAVUNDAPURAM	R.R.RETORT FOODS PVT LTD	31/3/2005	0.075	Solar Evaporation pan
326	VAZHAPPADI	CHINNAKAVUNDAPURAM	JAAIDEV HOSPITAL P LTD	31/3/2026	1	On land for irrigation
327	VAZHAPPADI	KARIPATTI	R.R.FRESH FORMS	31/3/2014	0.55	On land for irrigation
328	VAZHAPPADI	KARIPATTI	R.R. RETORT FOODS	31/3/2014	1	On land for irrigation
329	VAZHAPPADI	KARIPATTI	R.R.TASTY FOODS	CTE alone	0.8	On land for irrigation
330	VAZHAPPADI	KARUMAPURAM	HATSUN AGRO PRODUCTS LTD	31/3/2019	100	On land for irrigation
331	VAZHAPPADI	KARUMAPURAM	HATSUN AGRO PRODUCT LTD	31/3/2019	650	On land for irrigation
332	VAZHAPPADI	KARUMAPURAM	PARAGON POLYMER PRODUCTS PVT LTD	31/3/2018	0	No Trade Effluent
333	VAZHAPPADI	KARUMAPURAM	LAKSHMI FOOD PRODUCTS	31/3/2019	10.5	On land for irrigation
334	VAZHAPPADI	KARUMAPURAM	Bright Granites	31/3/2019	10	Recycling to process
335	VAZHAPPADI	KARUNGALPATTI	NARASU S SARATHY ENTERPRISES PVT LTD	31/3/2025	0	No Trade Effluent
336	VAZHAPPADI	KULLAMPATTI	SRI MANIKANDAN STARCH INDUSTRIES	31/3/2027	30	On land for irrigation
337	VAZHAPPADI	MANNARPALAYAM	NALLATHANGAL SAGO FACTORY	31/3/2016	150	On land for irrigation
338	VAZHAPPADI	METTUPATTI	GRANITE PRODUCTS CORPORATION	31/3/2004	38	Recycling to process
339	VAZHAPPADI	METTUPATTI	CHINTHAMANI SAGO FACTORY	31/3/2027	300	On land for irrigation
340	VAZHAPPADI	METTUPATTI	CHINTHAMANI FOODS AND FEEDS PRIVATE LTD	31/3/2019	0	No Trade Effluent
341	VAZHAPPADI	MINNAMPALLI	SELLIAMMAN SAGO FACTORY	31/3/2022	70	On land for irrigation
342	VAZHAPPADI	MINNAMPALLI	ANGALAMMAN SAGO FACTORY	NOP	0	No Trade Effluent
343	VAZHAPPADI	MUTAMPATTI	S.K.A.DAIRY FOODS INDIA PVT LTD	31/3/2026	135	On land for irrigation
344	VAZHAPPADI	NIRMULLIKUTTAI	SIVARAM SAGO FACTORY	NOP	0	No Trade Effluent
345	VAZHAPPADI	PERIYAGOUNDAPURAM	VIJAY M SAND	31/3/2029	20	Recycling to process

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Annexure-I Details of Industries along the polluted river stretch

346	VAZHAPPADI	PERIYAGOUNDAPURAM	RADIANT COLOURS SALEM PRIVATE LIMITED	31/3/2020	0	No Trade Effluent
347	VAZHAPPADI	PERIYAKAVUNDAPURAM	MAYTAS INFRA LTD-WET MIX MACADAM PLANT	31/3/2009	0	No Trade Effluent
348	VAZHAPPADI	PERUMAPALAYAM	VETRI VINAYAGA DAIRY	31/3/2019	5	On land for irrigation
349	VAZHAPPADI	PERUMAPALAYAM.M	SKM ANIMAL FEEDS AND FOODS INDIA P LTD	31/3/2020	0	No Trade Effluent
350	VAZHAPPADI	PERUMAPALAYAM.M	SRI LAKSHMI SAGO FACTORY	NOP	0	No Trade Effluent
351	VAZHAPPADI	SAKAR VALAPADI	SREE BALA HOSPITAL	31/3/2020	3.4	Public sewer
352	VAZHAPPADI	SARKAR VALAPADI	DEEPAM HOSPITAL	31/3/2020	0.4	Public sewer
353	VAZHAPPADI	SARKAR VALAPADI	S.P.APPARELS LTD-SPINNING DIVISION	31/3/2019	0	No Trade Effluent
354	VAZHAPPADI	SARKAR VALAPADI	TNSTC SALEM DIV-I LTD Valapady Branch	31/3/2019	0.5	On land for irrigation
355	VAZHAPPADI	SARKAR VALAPADI	GOVERNMENT HOSPITAL- VAZHAPPADI	31/3/2019	2.1	Public sewer
356	VAZHAPPADI	SINGIPURAM	THE RAMCO CEMENTS LTD	31/3/2020	0	No Trade Effluent
357	VAZHAPPADI	THUKKIYAMPALAYAM	DHANDAPANI BIO FUELS	31/3/2015	0	No Trade Effluent

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ANNEXURE-II - Report of analysis of industries

SALEM STEEL PLANT							
DATE OF COLLECTION 29.09.2018							
Sl. No.	**CORE PARAMETERS**	**RR-747 ETP-I, ASTP Effluent Outlet**	**RR-748 ETP-II, Neutral Effluent Outlet**	**RR-749 De Fluoridation permit outlet**	**RR-750 Oxidation ditch outlet**	**RR-751 STP plant outlet**	**RR-752 Sludge**
1	pH Values	6.73	6.71	7.71	7.42	7.6	_
2	TSS	16	16	12	20	16	_
3	TDS	224	156	296	_	_	_
4	Sulphate mg/l	10	<5	5	_	_	_
5	Oil & Grease	<4	<4	<4	_	_	_
6	BOD	<2	<2	<2	<2	<2	_
7	COD	16	16	16	16	16	_
8	Sulphide	<1	<1	<1	_	_	_
9	Fluoride mg/l	<1	<1	<1	_	_	102.69
10	Iron toal as Fe	0.43	0.29	0.55		_	2367
11	Ammonical Nitrogen	<2	<2	2.24	2.24	2.24	
12	Hexavalent Chromium	<0.05	<0.05	<0.05	_	_	<0.05
13	Total Chromium	<0.05	<0.05	<0.05	_	_	6776
14	Zinc	0.043	0.032	0.068	_	_	_
15	Nickel	<0.006	<0.006	<0.006	_	_	_
16	Total Nitrogen	_	_	_	0.199	0.242	_
17	Fecal Coliform MPN/100 ml	_	_	_	26	58	_
18	Total Coliform MPN/100 ml	_	_	_	70	120	_

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ANNEXURE-II - Report of analysis of industries

SALEM DISTRICT CO-OPERATIVE MILK PRODUCERS LTD			
DATE OF COLLECTION29.10.2018			
Sl. No.	**CORE PARAMETERS**	**RR-792 Inlet of ETP**	**RR-794 Outlet of ETP**
1	pH Values	6.32	7.69
2	TSS mg/l	172	40
3	TDS	2204	1420
4	Chloride	630	385
5	Sulphate	43	81
6	Oil & Grease	48	4
7	BOD	2500	31
8	COD	4480	312

ANNEXURE-II - Report of analysis of industries

VELLAKUTTAI SEWAGE TREATMENT PLANT			
DATE OF COLLECTION 29.10.2018			
Sl. No.	**CORE PARAMETERS**	**RR-797**	**RR-798**
1	pH Values	7.11	7.45
2	TSS mg/l	**56**	**28**
3	BOD mg/l	**11**	**10**
4	COD mg/l	**72**	**80**
5	Ammonia – N mg/l	2.240	2.240
6	Total Nitrogen	0.598	0.643
7	Fecal Coliform MPN/100 ml	49	**46**
8	Total Coliform MPN/100 ml	**170**	**110**

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Annexure-III

Action Taken against the Erring Textile units

Sl. No.	Date of Inspection	No of Textile Dyeing Units and Action Taken	No of Bleaching Units	Total
1.	12.01.2016	18 (Dismantled)	7 (Dismantled)	25
2.	21.06.2016	1 Show Cause Notice issued	6	7
3.	28.06.2016	2 (Dismantled)	--	2
4.	02.09.2016	2 (Dismantled)	--	2
5.	03.08.2016 24.08.2016 26.08.2016	14 (Closure direction issued by the Board)	--	14
6.	08.11.2016	2 (Dismantled)	--	2
7.	16.11.2016	7 (Dismantled)	--	7
8.	24.11.2016	9 (Dismantled)	--	9
9.	20.12.2016	14 (Dismantled)	--	14
10.	21.12.2016	7 (Dismantled)	--	7
11.	25.01.2017	14 (Dismantled)	--	14
12.	08.02.2017	8 (Dismantled)	--	8
13.	21.02.2017	2 (Dismantled)	--	2
14.	02.03.2017	4 (Dismantled)	--	4
15.	09.03.2017	4 (Dismantled)	--	4
16.	16.03.2017	4 (Dismantled)	--	4
17.	06.05.2017	7 (Dismantled)	--	7
18.	11.5.2017	6 (Dismantled)	--	6
19.	17.5.2017	8 (Dismantled)	--	8
20.	19.5.2017	17 (Dismantled)	--	17

Annexure-III - Action taken against the Erring Textile units

21.	20.9.2017	5 Dismantled	--	5
22.	12.10.2017	5 Dismantled, (Closure direction issued by the Board)	--	5
23.	28.10.2017	1 Dismantled	--	1
24.	2.11.2017	5 Dismantled, 1-Closure direction issued by the Board	--	5
25.	24.11.2017	15 Dismantled	--	15
26.	7.12.2017	16 Dismantled	--	16
27.	12.4.2018	6 Dismantled, Closure direction issued by the Board	--	6
28.	19.4.2018	2 Sealed	--	2
29.	08.05.2018	2 Dismantled & EB - DC	--	2
30.	15.5.2018	3- Dismantled, 2 – EB DC	--	3
31.	28.5.2018	4-Dismantled, 3- EB - DC	--	4
32.	13.6.2018	2- Dismantled	2 Bleaching	2
33.	19.6.2018	2 Consented units EB disconnected		2
34.	22.6.2018	3 EB - DC (2 Consented)	--	3
35.	26.6.2018	5 EB-DC & Dismantled	--	5
36.	2.7.2018	2 Dismantled & 1 Consented + 2 units EB disconnected	--	2
37.	3.7.2018	1 Dismantled & 2 EB disconnected (1 Consented Unit)	--	1
38.	4.7.2018	6-Dismantled & EB disconnected	--	6
39.	6.7.2018	1- Dismantled & EB DC	1 Bleaching	1
40.	7.7.2018	1 – Dismantled & EB - DC	--	1
41.	13.7.2018	2 – EB disconnected	1 Bleaching	3

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Annexure-III - Action taken against the Erring Textile units

42.	30.7.2018	4 Consented units – EB disconnected	--	4
43.	21.8.2018	1 Consented units – EB disconnected	--	1
44.	25.8.2018	1 Consented units – EB disconnected	--	1
45.	01.10.2018	4 – dismantled & EB disconnected	4 Bleaching	8
46.	10.10.2018	6- demolished, 2-EB disconnected	--	6
47.	16.10.2018	5-EB disconnected, demolished	--	5
48.	04.01.2019	6-demolsihed 2 -EB disconnected	2 Bleaching	8
49.	01.02.1019	4 – EB disconnected	--	4
50.	28.02.2019	5 – EB disconnected, 1- Demolished	4 Bleaching	9

Annexure-PI

Annexure - IV

SCHEDULE-VI: ENVIRONMENT (PROTECTION) RULES, 1986

(See rule 3A of E (P) Rules, 1986)

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS PART-A: EFFLUENTS

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land for Irrigation	Marine coastal areas
1	2	3(a)	3(b)	3 (c)	3 (d)
1	Colour and odour	See 6 of Annexure-I	-	See 6 of Annexure-I	See 6 of Annexure-I
2	Suspended solids mg/l Max.	100	600	200	(a) For process waste water -100 (b)For cooling water effluent 10 % above total suspended matter of influent
3	Particle size of suspended solids	shall pass 850 micron IS Sieve	-		(a) Floatable solids, max 3 mm. (b)Settleable solids, max 850 microns
4	[*Omitted*]				
5	pH value	5.5 to 9	5.5 to 9	5.5 to 9	5.5 to 9
6	Temperature	Shall not exceed 5°C above the receiving water temperature	-	-	Shall not exceed 5°C above the receiving water temperature
7	Oil and grease mg/l, Max	10	20	10	20
8	Total residual chlorine mg/l, Max	1.0	-	-	1.0
9	Ammonical nitrogen (as N) mg/l, Max	50	50	-	50
10	Total Kjeldahl nitrogen (as NH_3) mg/l, Max	100	-	-	100
11	Free ammonia [as NH_3] mg/l, Max	5.0	-	-	5.0
12	Biochemical Oxygen Demand (3 days at 27°C)] mg/l, Max	30	350	100	100
13	Chemical Oxygen Demand, mg/l Max	250	-	-	250
14	Arsenic (as As) mg/l, Max	0.2	0.2	0.2	0.2
15	Mercury (as Hg), mg/l, Max	0.01	0.01	-	0.01
16	Lead (as Pb) mg/l Max	0.1	1.0	-	2.0
17	Cadmium (as Cd) mg/l, Max	2.0	1.0	-	2.0
18	Hexavalent Chromium (as Cr^{+6}) mg/l, Max	0.1	2.0	-	1.0
19	Total chromium (as Cr) mg/l, Max	2.0	2.0	-	2.0

Annexure - IV

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land for Irrigation	Marine coastal areas
20	Copper (as Cu) mg/l Max	3.0	3.0	-	3.0
21	Zinc (as Zn) mg/l, Max	5.0	15	-	15
22	Selenium (as Se) mg/l Max	0.05	0.05	-	0.05
23	Nickel (as Ni) mg/l, Max	3.0	3.0	-	5.0
24	Omitted	*	*	*	*
25	Omitted	*	*	*	*
26	Omitted	*	*	*	*
27	Cyanide (as CN) mg/l ,Max	0.2	2.0	0.2	0.2
28	Omitted	*	*	*	*
29	Fluoride (as F) mg/l, Max	2.0	15	-	15
30	Dissolved Phosphates (as P) mg/l, Max	5.0	-	-	-
31	Omitted	*	*	*	*
32	Sulphide (as S) mg/l Max	2.0	-	-	5.0
33	Phenolic compounds [as C_6H_5OH] mg/l, Max	1.0	5.0	-	5.0
34	Radioactive materials				
	(a) Alpha emitters [Micro curie/ml] max	10^{-7}	10^{-7}	10^{-8}	10^{-7}
	(b) Beta emitters [Micro curie/ml] Max	10^{-6}	10^{-6}	10^{-7}	10^{-6}
35	Bio-assay test	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent
36	Manganese (as Mn)	2 mg/l	2 mg/l	-	2 mg/l
37	Iron (as Fe)	3 mg/l	3 mg/l	-	3 mg/l
38	Vanadium (as V)	0.2 mg/l	0.2 mg/l	-	0.2 mg/l
39	Nitrate Nitrogen	10 mg/l	-	-	20 mg/l
40	Omitted	*	*	*	*

* Omitted by Rule 2 (d) (i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No. G.S.R 801 (E), dated 31.12.1993

Annexure - V

Annexure-PII

Water Quality Criteria -Designated Best Uses of Water

Designated Best Use	Class	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	1.Total Coliforms Organism MPN/100ml shall be 50 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 6mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Outdoor bathing (Organised)	B	1.Total Coliforms Organism MPN/100ml shall be 500 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 5mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	1.Total Coliforms Organism MPN/100ml shall be 5000 or less 2. pH between 6 and 9 3. Dissolved Oxygen 4mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Propagation of Wild life and Fisheries	D	1. pH between 6.5 and 8.5 2. Dissolved Oxygen 4mg/l or more 3. Free Ammonia (as N)-1.2 mg/l or less 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	1. pH between 6.0 and 8.5 2. Electrical Conductivity at 25 °C micro mhos/cm, maximum 2250 3. Sodium absorption Ratio Max. 26 4. Boron Max. 2mg/l
	Below-E	Not meeting any of the A, B, C, D & E Criteria

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O/C

TAMIL NADU POLLUTION CONTROL BOARD

Action Plan on Rejuvenation of River Vasista Manivilundhan to Thiyaganur Stretch (Priority-I)

CONTENTS

Comprehensive Report on Prevention and Control of Pollution in River Vasista (Priority-I): An Action Plan for Rejuvenation

1.0 Introduction.

The Hon'ble National Green Tribunal (NGT) Principal Bench took Suo-Moto Cognizance of news report appeared in "The Hindu" authorized by Shri. Jacob Koshy titled "More River Stretches are now critically polluted – CPCB" and issued directions in para 50(i) to (x) vide its Original Application No. 673/2018 dated: 20.09.2018

1. All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e., BOD < 3 mg/L and FC < 500 MPN/100 ml) within six months from the date of finalisation of the action plans.

2. The action plans may be prepared by a four-member Committee comprising,

   a. **Director, Environment**

   b. **Director, Urban Development**

   c. **Director, Industries**

   d. **Member Secretary, TNPCB**

   This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called as **"River Rejuvenation Committee" (RRC)**. The RRC will function under the overall supervision and coordination of Principal Secretary, Environment & Forest, Govt. of Tamilnadu.

3. The action plan will include components like identification of polluting sources including functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterization of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of

Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/Committee and out of Central Schemes.

4. The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.

5. The Chief Secretaries of the State and Administrators/ Advisors to Administrators of the Union Territories will be personally accountable for failure to formulate action plan, as directed.

6. All States and Union Territories are required to send a copy of Action Plan to CPCB especially w.r.t Priority I & Priority II stretches for approval.

7. The States and the Union Territories concern are directed to set up Special Environment Surveillance Task Force, comprising nominees of District Magistrate, Superintendent of Police, Regional Officer of State Pollution Control Board and one person to be nominated by District Judge in his capacity as Chairman of Legal Services Authority on the pattern of direction of this Tribunal dated 07.08.2018, in *Original Application No. 138/2016 (TNHRC), "Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case).*

8. The Task Force will also ensure that no illegal mining takes place in riverbeds of such polluted stretches.

9. The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement and failure may also be published on such website. The

Committee may consider suitably rewarding those contributing significantly to the success of the project.

10. The RRCs will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by this Tribunal in order dated 13.07.2017 in O.A No. 200 of 2014, M.C. Mehta Vs. U.O.I will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

Based on the directions of Hon'ble NGT (PB) vide its Original Application No. 673/2018 dated: 20.09.2018 the Principal Secretary (Environment & Forest) has convened the River rejuvenation committee meeting on 14.11.2018 regarding the directions issued by the Hon'ble NGT (PB) to prepare action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu with the heads of the following departments:

1. Municipal Administration and Rural development and its line departments,
2. Chennai Metro Water Supply and Sewage Board.
3. Tamil Nadu Water Supply and Drainage Board.
4. Environment & Forest.
5. Central Pollution Control Board, Bangalore.
6. Tamil Nadu Pollution Control Board.

In the meeting it was decided to evolve the detailed action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu. The minutes of the meeting was communicated to the above departments requesting certain details with action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu. Remainder was also communicated to the above departments.

As per the Hon'ble NGT (PB) directions in its Original Application No. 673/2018 dated: 20.09.2018, Four member River Rejuvenation Committee (RRC) was constituted in Tamil Nadu and Government Order (G.O.) was issued by the Environment and Forest (EC.1) Department vide G.O. (D) No. 372 dated: 26.12.2018 (copy enclosed) to execute and to review the action plan for the Rejuvenation/Restoration of water along the polluted river stretches in Tamil Nadu as

ordered by the Hon'ble National Green Tribunal, Principal Bench. River Rejuvenation Committee (RRC) members are as follows:

1. Industries Commissioner.
2. Commissioner, Municipal Administration.
3. The Director of Environment.
4. The Member Secretary, Tamil Nadu Pollution Control Board.

The RRC will function under the overall supervision and coordination of Principal Secretary, Environment and Forests Department, Government of Tamil Nadu.

2.0 Introduction about the River Vasista:

River Vasista Originates from Puzhuthikuttai dam and Pappanaickenpatti Dam flow through Pethanaikenpalayam, Attur, Deviyakurichi, Manivilundhan, Thalaivasal and Aragalur and enters into Villupuram District (map enclosed).

In Salem District the River flows over a stretch of approximately 74 KM from the Pappanaickenpatti Dam and approximately 13 KM from Puzhuthikuttai dam. River Vellaru which originates from Jarugumalai R.F confluence with the River Vasista at Kundu ManiyanKaradu.

River Chitraru which originates from Pethanaickenpalayam lake confluence with the River Vasista at Narasingapuram. River Vasista and River Swedha flowing together at Ayan Peraiyur Village and forms River Vellar which finally confluences in Bay of Bengal at Parangipettai.

The Vellar system consists of the Vasista and Sweata Nadi, which drain two parallel valleys running east and west in Attur taluk, former carrying off the drainage of Kalrayan Hills and the latter carrying the drainage of Kolli Hills and Pachamalais.

3.0 Source of Pollution in river stretch:

The main sources of Pollution in river Vasista is mainly due to the discharge of domestic sewage into the river generated from the local bodies viz Attur & Narasingapuram Municipalities, Pethanaickenpalayam, Yethapur & Belur Town Panchayats, at present said local bodies do not have treatment sytems to handle the sewage.

4.0 Industrial source:

Sago units were located along the banks of the River. These units were issued with Consent order for the treatment and disposal of trade effluent for on land for irrigation. 27 such units located near the River Vasista as below:

Sl. No	Area	Industry Name	Consent validity	Trade effluent quantity in KLD	Disposal
1	Ammampalayam	S.S.SAGO INDUSTRIES	31/3/2026	200	On Land for Irrigation
2	Ammampalayam	SRI VENKATESWARA RICE AND SAGO FACTORY	31/3/2027	200	On Land for Irrigation
3	Ammampalayam	SRI MAHALAKSHMI SAGO FACTORY	31/3/2018	200	On Land for Irrigation
4	Ammampalayam	SRI PALANIMURUGAN SAGO FACTORY	31/3/2023	150	On Land for Irrigation
5	Ammampalayam	KALAI STARCH INDUSTRIES	30/6/2018	150	On Land for Irrigation
6	Ammampalayam	NALLIAPPA SAGO FACTORY	31/3/2018	12	On Land for Irrigation
7	Ammampalayam	SIVA INDUSTRIAL STARCH AND SAGO FACTORY	31/3/2019	12	On Land for Irrigation
8	Ammampalayam	SREE BALAMURUGAN SAGO INDUSTRIES	31/3/2019	150	On Land for Irrigation
9	Ammampalayam	SRI SARASWATHI SAGO FACTORY	31/3/2021	150	On Land for Irrigation
10	Ammampalayam	SHRI RAJAMANIKANDAN MILLS	31/3/2019	150	On Land for Irrigation
11	Ammampalayam	ARUL MURUGAN STARCH INDUSTRIES	31/3/2026	150	On Land for Irrigation
12	Ammampalayam	SRI VENKATACHALAPATHI SAGO FACTORY	31/3/2027	60	On Land for Irrigation

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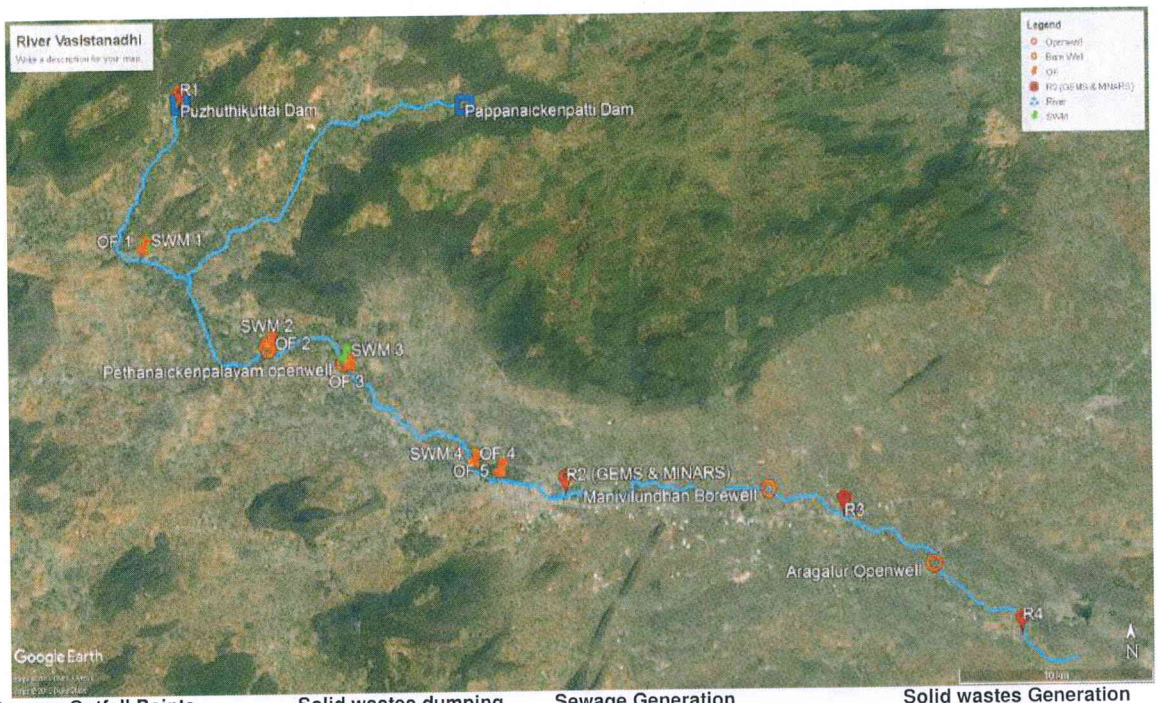
13	Kattukottai	THILLAIKARASI SAGO FACTORY	31/3/2020	200	On Land for Irrigation
14	Kattukottai	SANKAR SAGO FACTORY	31/3/2022	175	On Land for Irrigation
15	Kattukottai	SRI SDK SAGO FACTORY	31/3/2020	200	On Land for Irrigation
16	Kattukottai	SRI SIVASAKTHI SAGO FACTORY	31/3/2008	150	On Land for Irrigation
17	Manivilundan	THIRUMURUGAN SAGO FACTORY	31/3/2022	100	On Land for Irrigation
18	Manivilundan	KUMARAVEL SAGO FACTORY	31/3/2018	100	On Land for Irrigation
19	Narasingapuram	SRI MURUGAN SAGO FACTORY	31/3/2023	12.5	On Land for Irrigation
20	Narasingapuram	SRI VELMURUGAN SAGO FACTORY	31/3/2024	130	On Land for Irrigation
21	Kallanatham	SAKTHI SAGO FACTORY	31/3/2028	12	On Land for Irrigation
22	Thiyaganur	KAMAL SAGO FACTORY	31/3/2020	150	On Land for Irrigation
23	Nathakkarai	N.S.D. SAGO FACTORY	31/3/2016	150	On Land for Irrigation
24	Nathakkarai	SRI VELMURUGAN SAGO FACTORY	31/3/2020	200	On Land for Irrigation
25	Attur	SRI SRINIVASA SAGO FACTORY	31/3/2022	100	On Land for Irrigation
26	Attur	JAYAMURUGAN SAGO FACTORY	31/3/2016	200	On Land for Irrigation
27	Attur	SRI RAMAVILAS SAGO AND STARCH INDUSTRIES	31/3/2023	12	On Land for Irrigation

Fig 1: Map showing the origin and the drains connecting River Vasista



Sewage Outfall Points
1.Belur Outfall Point (OF1)
2.Yethapur Outfall Point(OF2)
3.Pethanaickenpalayam Outfall Point (OF3)
4. Appamasamudram Outfall Point (OF4)
5. Vinayagapuram Outfall Point (OF5)

Solid wastes dumping
1.Belur Bridge(SWM 1)
2.Yethapur (SWM 2)
3.Pethanaickenpalayam (SWM 3)
4. Appamasamudram Outfall Point (SWM 4)

Sewage Generation
1.Belur-0.51 MLD
2.Yethapur -1.164 MLD
3.Pethanaickenpalayam -1.591 MLD
4. Narasingapuram -1.109 MLD
5. Attur-8.858 MLD

Solid wastes Generation
1.Belur-1.345 TPD
2.Yethapur -0.210 TPD
3.Pethanaickenpalayam -2.823 TPD
4. Narasingapuram -8.54 TPD
5. Attur-24 TPD

Fig:2 River Vasista – Sewage outfall points and Solid waste dumping locations

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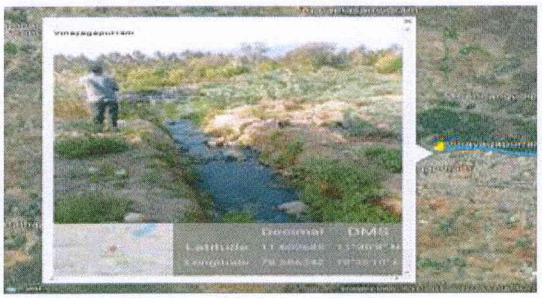
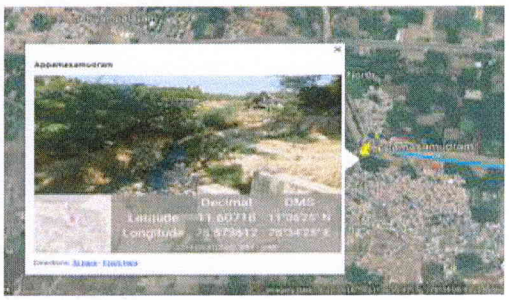
Sewage Outfall Points – 5 Locations				
Sl. No.	Sewage Out-fall Location	Name of the Local Body	GPS Co-ordinates	
			Latitude	Longitude
1	Vinayagapuram	Attur Municipality	11°36'9"N	78°35'10"E
2	Appamasamudram	Narasingapuram Municipality	11°36'25"N	78°34'25"E
3	Pethanaickenpalayam	Pethanaickenpalayam Town Panchayat	11°39'3"N	78°30'47"E
4	Yethapur	Yethapur Town Panchayat	11°39'38"N	78°28'29"E
5	BelurBridge	Belur Town Panchayat	11°42'18.3"N	78°24'47"E
Solid Waste Dumping Points – 4 Locations				
Sl. No.	Sewage Out-fall Location	Name of the Local Body	GPS Co-ordinates	
			Latitude	Longitude
1	Appamasamudram	Narasingapuram Municipality	11°36'25"N	78°34'25"E
2	Pethanaickenpalayam	Pethanaickenpalayam Town Panchayat	11°39'14"N	78°30'41"E
3	Yethapur	Yethapur Town Panchayat	11°39'37.78" N	78°28'29.03"E
4	BelurBridge	Belur Town Panchayat	11°42'18.3"N	78°24'47"E

Photographs Showing the Sewage Out-fall Points



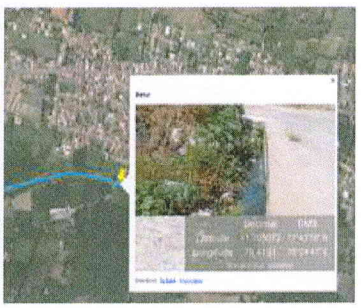
River Vasista – Vinayagapuram (Attur Municipality) – 11°36'9"N 78°35'10"E



River Vasista – Appamasamudram (Narasingapuram Municipality) – 11°36'25"N 78°34'25"E

River Vasista - Pethanaickenpalayam Town Panchayat – 11°39'3"N 78°30'47"E

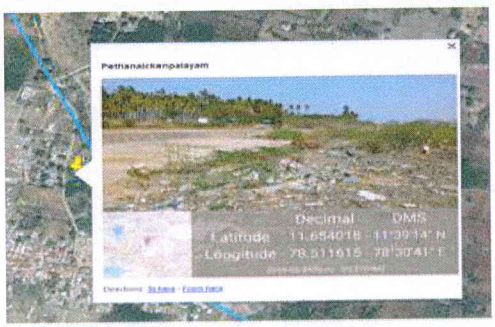
River Vasista Yethapur Town Panchayat – 11°39'38"N 78°28'29"E



River Vasista - Belur Town Panchayat - 11°42'18.3"N 78°24'47"E

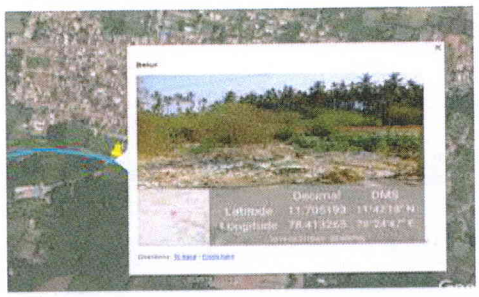
Photographs Showing the Solid Waste Dumping Points

River Vasista – Appamasamudram (Narasingapuram Municipality) – 11°36'25"N 78°34'25"E



River Vasista – Pethanaickenpalayam Town Panchayat – 11°39'14"N 78°30'41"E

River Vasista – Yethapur Town Panchayat – 11°39'37.78"N 78°28'29.03"E



River Vasista – Belur Town Panchayat – 11°42'18.3"N 78°24'47"E

4.1 District/Area wise details of Industries

Sl. No.	Taluk	LARGE				MEDIUM				SMALL				Total
		Red	Orange	Green	White	Red	Orange	Green	White	Red	Orange	Green	White	
1	Attur	2	3	1	0	0	0	0	0	7	181	28	1	**223**
2	Pethanaickenpalayam	0	1	0	0	0	0	1	0	0	12	7	0	**21**
3	Vazhappadi	4	9	3	0	1	3	1	0	13	67	24	2	**127**
	** **Total** **	**6**	**13**	**4**	**0**	**1**	**3**	**2**	**0**	**20**	**260**	**59**	**3**	**371**

4.2 Details of industries located in the taluks where the River passes:

Type of units	Valappady	Pethanaickenpalayam	Attur	Total
Sago industries, Dairy, Milk Chilling, Stone Crusher and Stone quarries	223	21	127	371

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5.0 Inspection Team Members:

Inspection team was formed by Tamil Nadu Pollution Control Board including Engineers and Scientists for inspection, sample collection and analysis of samples along the entire stretch as per the Hon'ble NGT (PB) directions in its original application number 673/2018 dated 20.09.2018.

Sl. No.	Polluted River Stretch	Jurisdiction Office	Name of the Team Members Tvl	Designation
1	VasistaRiver Thathiampati to T.Konagapadi- Priority- 1	O/o DEL, Hosur.	S. Dhanapal	Deputy CSO
2		O/o, DEL, Dindukkal	M. Sakthivel	Deputy CSO
3		O/o, AEL, Salem	Gopal	Field Assistant

6.0 Sample collection details in the River Vasista

Details of sample collection from industries:

Due to non-availability of Raw materials the Sago units were not under operation and no samples were collected from the industries. Effluent samples were collected from the M/s. Hatsun Agro Products Ltd (Milk Chilling Plant) located in Thalaivasal.

7.0 River water and drain samples, Ground water samples collected details with live photograph along the River stretch (Bore well, dug well etc.,)

During 4th of January, 2019 the team constituted for sample collection has collected 8 samples from River Vasista to study the pollution impact, of which 3 samples were collected in the river stretch and 5 ground water samples were collected at certain salient points mainly covering before and after confluence of sewage. Details of sampling locations with date of sampling are given in the table below.

Sl. No.	Point of collection	GPS coordinates		Date of sample collection
1	Anaimedu Reservoir	11°46'29.1"N	78°25'46.9"E	03/01/2019
2	Ethapur (BW) Down	11°39'31.6"N	78°28'37.1"E	03/01/2019

	stream			
3	Pethanaickenpalayam (OW) Down stream	11°39'21.5"N	78°30'44.9"E	03/01/2019
4	Attur -Down Stream	11°35'48.6"N	78°37'08.4"E	03/01/2019
5	Manivizhandan Village (BW) Down Stream	11°35'51.7"N	78°42'57.7"E	03/01/2019
6	Thalaivasal River – Down Stream	11°35'10.4"N	78°45'04.8"E	03/01/2019
7	Aragalur (OW) –Down Stream	11°33'49.2"N	78°47'35.5"E	03/01/2019
8	Chitheri (OW)-Down stream	11°31'57.8"N	78°50'00.3"E	03/01/2019

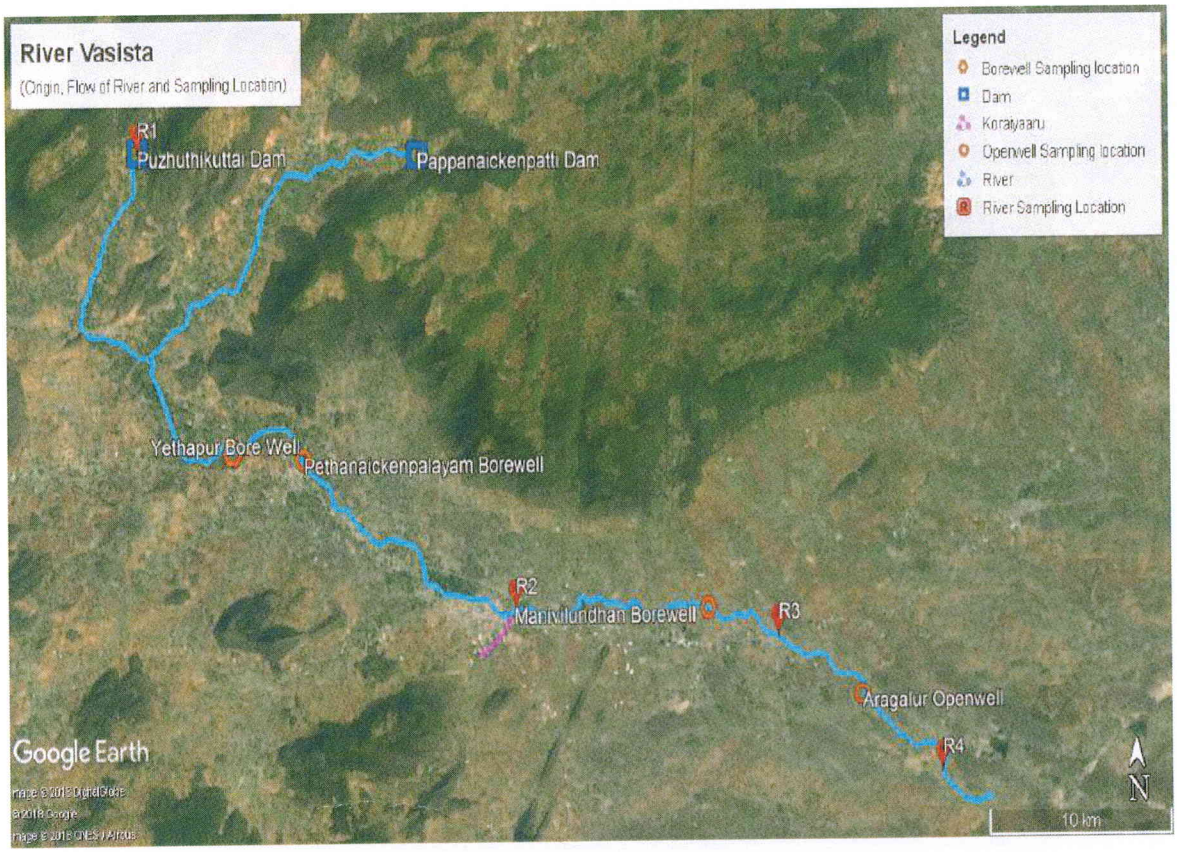

Fig 2: Map showing the origin and the drains connecting River Vasista

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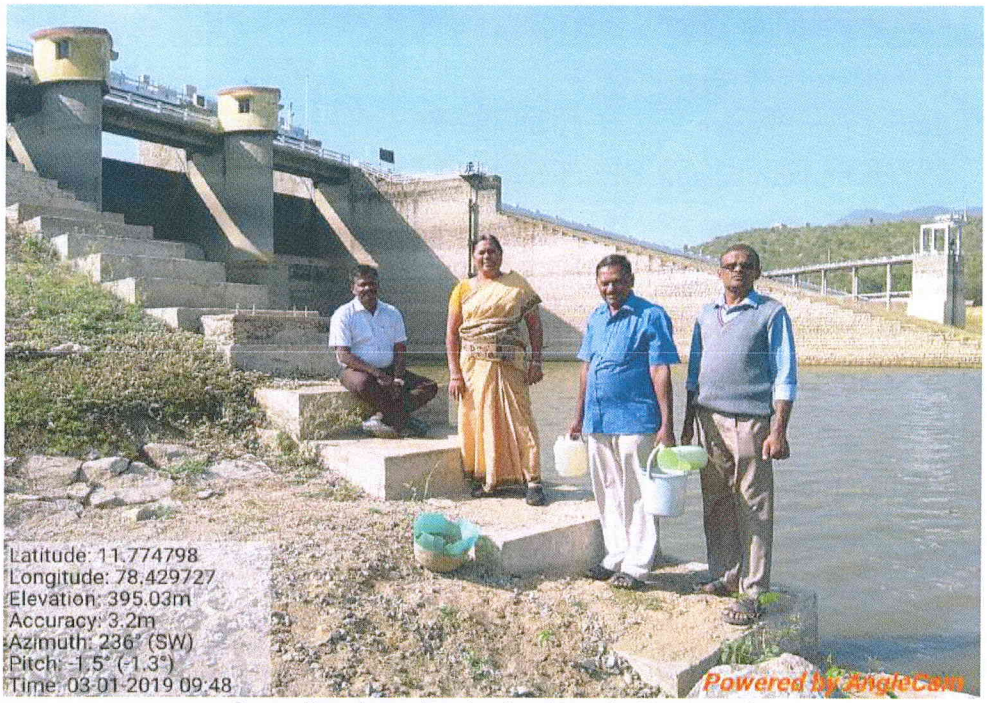
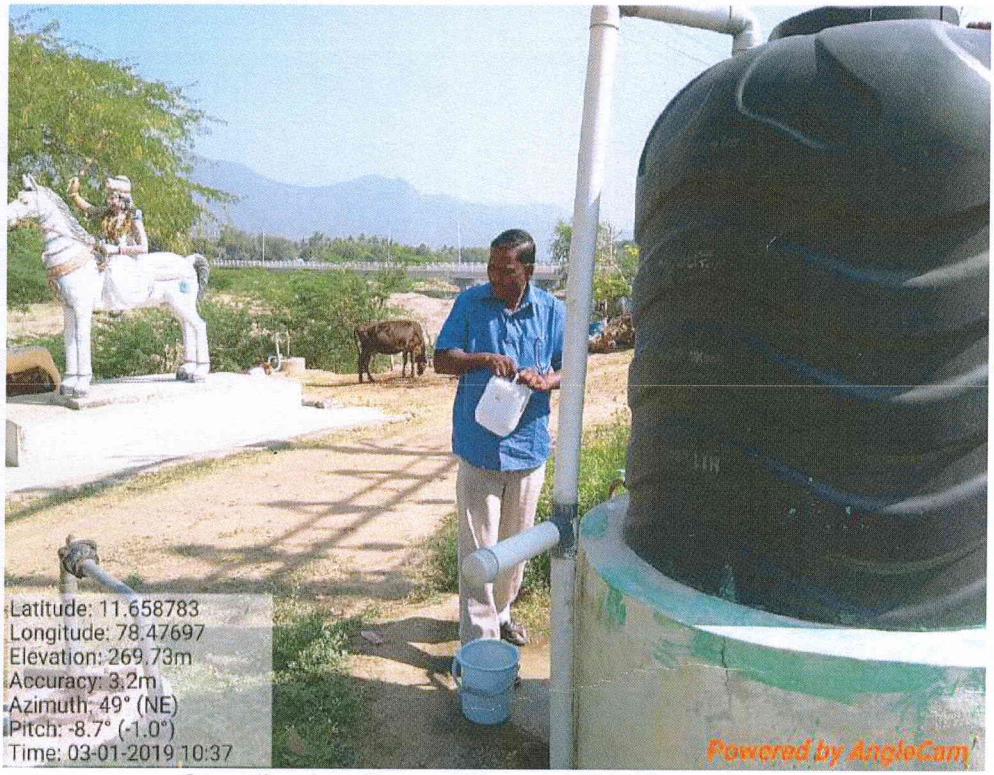
Photographs taken during sampling

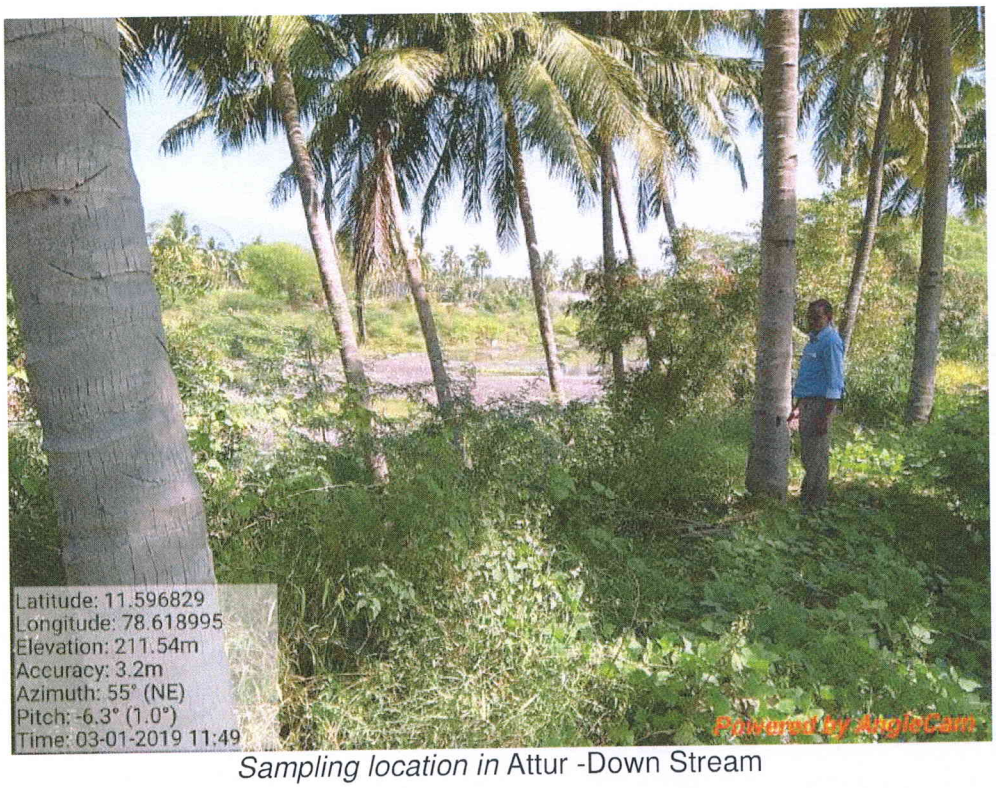


Sampling location in Anaimedu Reservoir



Sampling location in Ethapur (BW) Down stream

Sampling location in Pethanaickenpalayam (OW) Down stream



Sampling location in Attur -Down Stream

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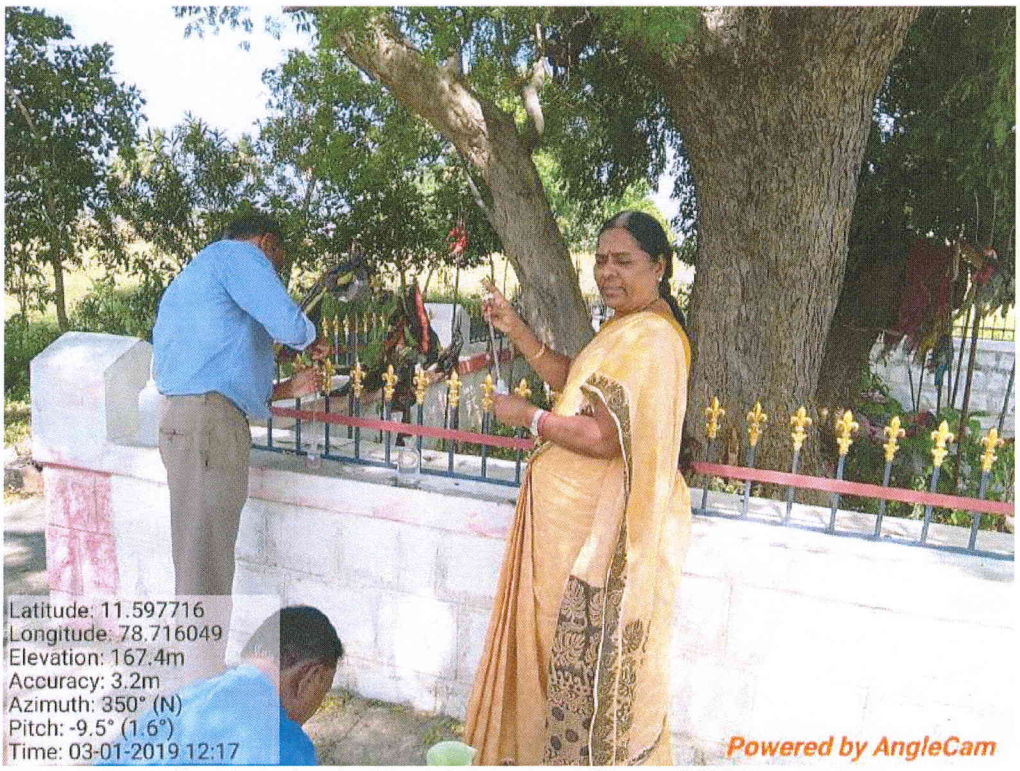
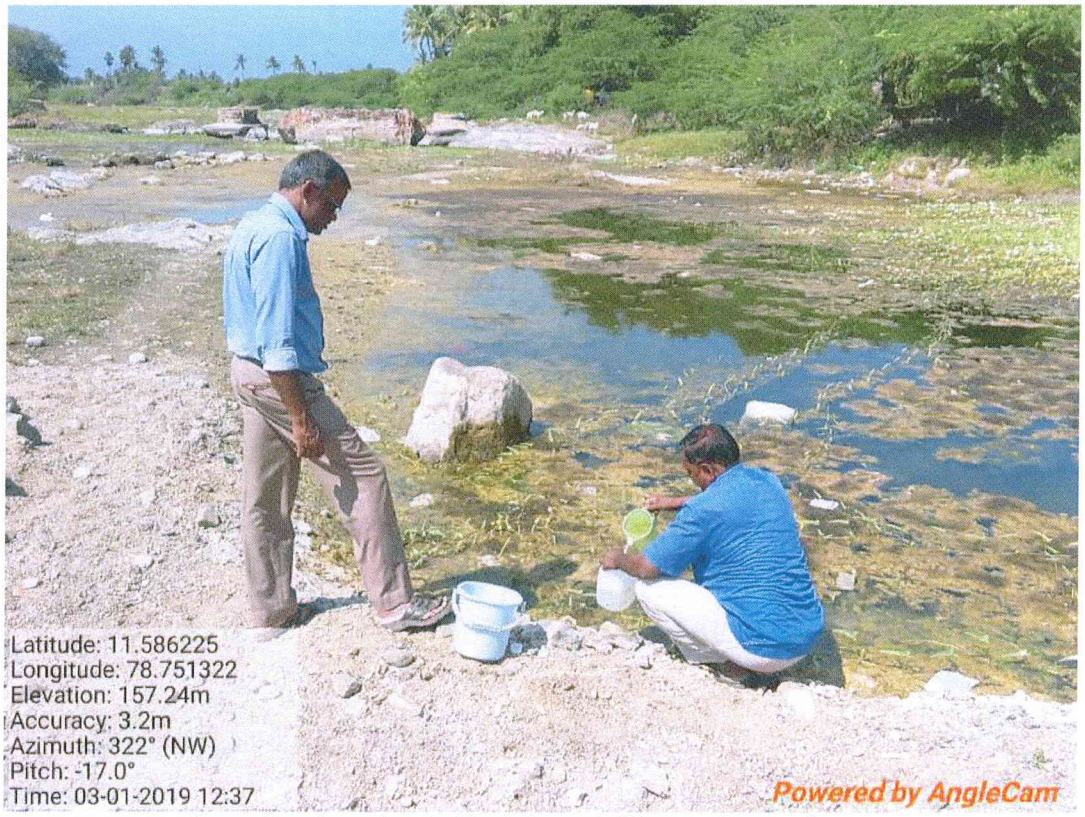
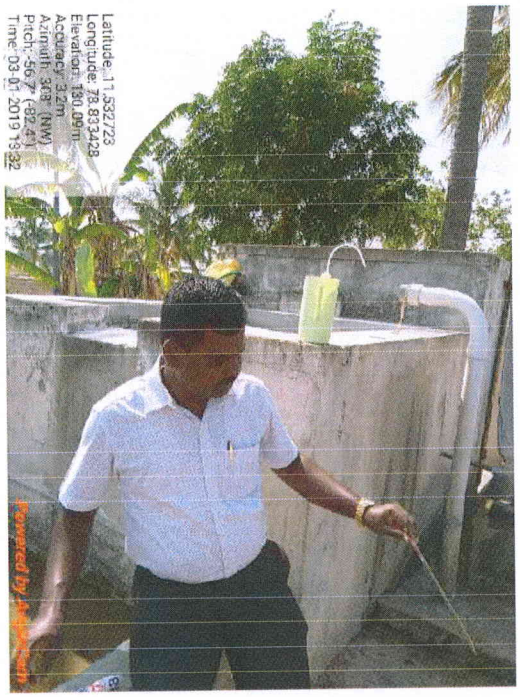


Sampling location in Manivizhandan Village (BW) Down Stream



Sampling location in Thalaivasal River – Down Stream



Sampling location in Aragalur (OW) –Down Stream

8.0 Status of water quality of river water in the study area.

River water samples are collected from River Vasista at three locations (i.e Anaimedu Reservoir, Auttur (Down-Stream) and Thalaivasal River (Down-Stream). Water quality monitoring results for eight samples collected from River Vasista is given in the table below - for general parameters and heavy metals.

Sl. No	Sample No.	Point of Collection	DO	Faecal * Coli form	BOD	Cu	Zn	Pb	Cd	Ni	Mn	Fe	T.Cr	Status of compliance with respect to WQC limit
			mg/l	MPN/ 100Ml	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
1	1736	Anaimedu Reservoir	7.0	11	7.5	<0.0015	<0.0015	<0.015	<0.0008	0.332	<0.1	<0.05	<0.05	Complied except BOD
2	1739	Auttur (Down Stream)	NIL	$170x10^4$	342	1.99	<0.0015	<0.015	<0.0008	0.455	<0.1	<0.05	<0.05	Not complied
3	1741	Thalaivasal River (Down Stream)	6.9	140	4	<0.0015	0.0042	<0.015	<0.0008	0.188	<0.1	<0.05	<0.05	Complied except BOD
Water quality criteria (WQC) limit for Bathing			**≥ 5 mg/l**	**≤ 500 MPN/100 ml**	**≤ 3 mg/l**	-	-	-	-	-	-	-	-	-

9.0 Status of water quality of ground water in the study area

Ground water samples were collected at five locations (i.e. Ethapur (Down-stream) Bore well, PethanaickenPalayam (Down-stream) Open well, Manivizhandhan Village (Down-stream) Bore well, Open well Aragallur (Down-stream)& Open well Chitheri (Down Stream) by the Inspection team. Ground water sample collected from afore-said location was analysed in TNPCB laboratory. Water Quality Monitoring Results of ground water sample collected by the Inspection team is given in the table below

Sl. No	Sample No.	Point of Collection	SO4	F	O&G	Cu	Zn	Pb	Cd	Ni	Mn	Fe	T.Cr	Status of compliance with respect to WQC limit
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
1	1737	Ethapur (Down stream) Bore well	149	0.484	< 1	0.098	<0.0015	<0.015	<0.0008	0.049	<0.1	<0.05	<0.05	Cu & Ni not Complied
2	1738	PethanaickenPalayam (Down stream) Open well	115	0.397	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.088	<0.1	0.074	<0.05	Nickel not complied
3	1740	Manivizhandhan Village (Down stream) bore well	115	0.253	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.033	<0.1	0.074	<0.05	Nickel not complied
4	1742	Open well Aragallur (Down stream)	131	0.541	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.082	<0.1	0.084	<0.05	Nickel not complied
5	1743	Open well Chitheri (Down Stream)	113	0.282	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.088	<0.1	0.065	<0.05	Nickel not complied
IS10500-2012 Drinking water specifications-Acceptable limit (in mg/l)			**200**	**1.0**	**0.5 ***	**0.05**	**5**	**0.01**	**0.003**	**0.02**	**0.1**	**0.3**	**0.05**	**Complied**

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10.0 Assessment of Compliance of the effluents/sewage discharge norms by the industries in study area.

The Report of analysis of the treated trade effluent samples collected from M/s. Hatsun Agro Products Ltd located at Thalaivasal reveals that the unit achieves the discharge standards prescribed by the Board. ROA of treated trade effluent and ground water samples collected around M/s. Hatsun Agro Products Ltd located at Thalaivasal are enclosed in Annexure-1.

- **Whether there is any flow of sewage in upstream of the sampling point.**

The main source of pollution in River Vasistanadhi from Belur to Aragalur stretch is sewage from local bodies and municipal solid wastes. The River passes through Belur, Ethapur Town Panchayat and Pethanaickenpalayam Town Panchayat at the periphery and receives municipal wastewater from the adjoining habitations. Major contribution of sewage is from Narasingapuram and Attur Municipality. In summer months the river is completely dry. The municipal solid waste generated from the adjacent local bodies dumped at the banks of the river in haphazard manner. There are sago units and rice mills are located in the River banks. There is no industrial effluent discharge into the River.

Sago units were located along the banks of River. These units were issued with Consent order for the treatment and disposal of trade effluent for on land for irrigation.

Details on Consent / Authorization issued by the Board for the establishment of the STP / Solid waste facility

a. Sewage Treatment Plant - Nil

b. Solid Waste Facility - Nil

c. Narasingapuram and Attur Municipality has provided decentralized micro composting centres across the city to manage the bio degradable solid wastes. Attur Municipality and Narasingapuram Municipality have applied for the authorization.

- **Status on the ground reality of the STPs and Waste processing facilities provided by the local body for handling sewage and solid waste.**

a. Sewage Treatment Plants- No STPs were provided by the local bodies located along the River Stretch.

b. Solid Waste Management-
Narasingapuram and Attur Municipality has provided decentralized micro composting centres across the city to manage the bio degradable solid wastes.

11.0 Status of Sago industries located along the River bank with consent details, waste water generation and final mode of industrial effluent discharge:

Details already furnished in point No. 4.0

11.1 Operation status of ETPs

Basically the sago units located in these areas has provided ETP with the following components for the treatment of their trade effluent.

1. Collection Tank
2. Anaerobic Digestor
3. Aeration tank
4. Settling Tanks
5. Treated water sump
6. Sludge drying beds

These units operate and maintain the ETPs for the Bio-Gas generation and they are being utilised for Sago Roasting and use in customised biogas D.G sets and the treated effluent are utilized for irrigation purposes.

12.0 Status of installation and operation status of Online Continuous Effluent Monitoring Systems (OCEMS)

The unit M/s. Hatsun Agro Products Ltd located at Thalaivasal is at a distance of 1.1km from the River Vasista. The unit has provided Online Continuous Effluent Monitoring System (OCEMS) and it is continuously monitored by TNPCB.

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13.0 General observations and recommendations of the inspection team

S. No.	Name of the unit and address	Online stack monitors			Online effluent parameters	
	Others	Stack attached to	Required	Provided	Required	Provided
1	Hatsun Agro Product Ltd, Milk Powder Division, Attur Main Road, Karipatti Village, Vazhappadi Taluk, Salem Dist	8TPH Coal Boiler	SPM SOx NOx Hg	SPM	BOD pH COD TSS Flow	BOD pH COD TSS Flow
2	Hatsun Agro Product Ltd, Milk Powder Division, Attur Main Road, Karumapuram Village, Vazhappadi Taluk, Salem Dist	8 TPH F.O and 3TPH Wood Boiler (Common stack)	-	SPM	BOD pH COD TSS Flow	BOD pH COD TSS Flow
3	Hatsun Agro Product Ltd, Dairy Division, Aatupannai, Periyeri Attur Taluk, Salem District.	3 TPH Wood Boiler (Common stack)	-	SPM	BOD pH COD TSS Flow	BOD pH COD TSS Flow

It is recommended that the Narasingapuram Municipality, Attur Municipality and other Town Panchayats, which are located along the stretch of the River Vasista, should provide STP to the entire quantity of the Sewage.

14.0 Recommendations- Action plan of the River stretch

Proposed Short Term and Long Term Action Plan for Rejuvenation of River Vasistanadhi:

Sl. No.	Description of Source	Action Plan for Rejuvenation of River Vasistanadhi	Organisation/ Agency Responsible for Execution of the Action Plan	Time Target
1.	Industrial Pollution Control	No industrial discharge	TNPCB	-
2.	Sewage Treatment and Disposal plan	❖ **Salem District** ❖ **Narasingapuram Municipality** • No. of sewage outfall identified: 3 Location • Population: 26000 • Qty of Sewage generated: 1.28 MLD • Status of UGSS: Not Provided • Status of STP: Not Provided • Present Mode of Disposal: The black water is collected in septic tanks by individual households. • **Plan of Action:** • In order to treat the black water, it is proposed to **cluster with Attur FSTP** and co-treated. • To handle the **sullage water** discharged through **3 no. of major channels** which confluence with the river stretch, it is proposed to provide in-situ treatment methodology by	Municipal Administration	

		providing Screen, Grit followed by Horizontal planted gravel filter which will treat the sullage and discharge the treated water into the water course. • The ULB has prepared detailed estimate for establishing liquid waste treatment facility at a cost of **Rs100.45lakh**. This fund is proposed to be tied up with **Capital grant fund** 2019-20 and is expected to be completed by **October 2019.**		Oct-2019
		❖ **Attur Municipality** • No. of sewage outfall identified: 1 Location • Population: 65200 • Qty of Sewage generated: 4.45 MLD • Status of UGSS: Not Provided • Status of STP: Not Provided • Present Mode of Disposal: The black water is collected in septic tanks by individual households. • **Plan of Action:** • In order to treat the black water, construction of **40 KLD Fecal Sludge Treatment Plant** work is taken up and is in progress at an estimated cost of **Rs. 4.41 Crore** and it will be completed before **31.12.2019** under **IUDM 2018-19 fund**.	Municipal Administration	

		• To handle the **sullage water** discharged through **3 no. of major channels** which confluence with the river stretch, it is proposed to provide **in-situ treatment** methodology by providing Screen, Grit followed by Horizontal planted gravel filter which will treat the sullage and discharge the treated water into the water course. • The ULB has prepared detailed estimate for establishing liquid waste treatment facility at a cost of Rs.165.70 lakh. This fund is proposed to tied up with **Capital grant fund 2019-20** and is expected to be completed by **October 2019.**		Oct-2019
		❖ **Pethanaickenpalayam Town Panchayat** • No. of sewage outfall identified: 1 Location • Population: 17678 • Qty of Sewage generated: 0.520 MLD • Status of UGSS: Not Provided • Status of STP: Not Provided • Present Mode of Disposal: • The black water is collected in septic tanks by individual households. • 0.660 MLD of Sullage water discharged into irrigation channel in	Directorate of Town Panchayat	

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		2 locations. **Plan of Action:** • Detailed project report have been prepared at an estimated cost of Rs 120.00 Lakhs for treatment and disposal of sullage water by Reed Bed Filter Technology under IUDM 2019-2020 fund. • Total number of household 4872. In which 3900 numbers having individual toilets. In addition to that 456 numbers of household covered under HFA Scheme. Balance 516 numbers of household using community toilets. Septic tank waste collected through private lorries to STP. STP maintained by Salem Corporation (Distance-35KM).		June-2020
		❖ **Yethapur Town Panchayat** • No. of sewage outfall identified: 1 Location • Population: 10968 • Qty of Sewage generated: 0.33 MLD • Status of UGSS: Not Provided • Status of STP: Not Provided • Present Mode of Disposal: • The black water is collected in septic tanks by individual households. • 0.330 MLD of Sullage water discharged into irrigation channel in 8 locations.	Directorate of Town Panchayat	

		Plan of Action: • Detailed project report have been prepared at an estimated cost of Rs 100.00 Lakhs for treatment and disposal of sullage water by Reed Bed Filter Technology under IUDM fund. • Total number of household 2729. In which 506 numbers having individual toilets. In addition to that 158 numbers of household covered under HFA Scheme. Balance 998 numbers of household 2065 using community toilets. Septic tank waste collected through private lorries to STP. STP maintained by Salem Corporation (Distance-30KM).		June-2020
		❖ **Belur Town Panchayat** • No. of sewage outfall identified: 1 Location • Population: 1617 • Qty of Sewage generated: 0.26 MLD • Status of UGSS: Not Provided • Status of STP: Not Provided • Present Mode of Disposal: • The black water is collected in septic tanks by individual households. • 0.260 MLD of Sullage water	Directorate of Town Panchayat	

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		discharged into irrigation channel in 5 locations. **Plan of Action:** • Detailed project report have been prepared at an estimated cost of Rs 100.00 Lakhs for treatment and disposal of sullage water by Reed Bed Filter Technology under IUDM fund. ❖ Total number of household 2404. In which 1273 numbers having individual toilets. In addition to that 133 numbers of household covered under HFA Scheme. Balance 998 numbers of household using community toilets. Septic tank waste collected.		June-2020
		❖ **Manivilundhan Village Panchayat** • No. of sewage outfall identified: Nil • Population: 12115 • Qty of Sewage generated: 0.018 MLD • Status of UGSS: Not Provided • Status of STP: Not provided • Present Mode of Disposal: • Discharged into Soak pits. • **Plan of Action:** • Total nos. of habitations is 21 and has 3139 households. Now	Rural Development & Panchayat Raj	

		individual & community soak pits are proposed under MGNREGS 2019-2020. ❖ After construction of soak pits, there is no sewage water will be directly disposed into the river.		July-2019
		❖ **Thiyaganur Village Panchayat** • No. of sewage outfall identified: Nil • Population: 2234 • Qty of Sewage generated: 0.096 MLD • Status of UGSS: Not Provided • Status of STP: Not provided • Present Mode of Disposal: • Discharged into Soak pits. • **Plan of Action:** • Total nos. of habitations is 4 and has 655 households. Now individual & community soak pits are proposed under MGNREGS 2019-2020. After construction of soak pits, there is no sewage water will be directly disposed into the river.	Rural Development & Panchayat Raj	July-2019
3	Solid Waste Management and Disposal Plan	❖ **Salem District** ❖ **Narasingapuram Municipality** • No. of MSW dumping points identified: 1 • Population: 26000 • Qty of MSW Generated: Wet waste: 4 TPD Dry waste: 3 TPD	Municipal Administration	

		Total: 7 TPD MSW Collection – 94% MSW Segregation – 87% Present Treatment Method: Wet waste: Nil Dry waste: 3 TPD • Other saleable waste (Plastic, Rubber, Metal etc.,) of 1.8 Tonne sold out to the identified vendors & registers are being maintained. • The Non saleable Non Biodegradable waste of 0.9 TPD is stored in the earmarked location at MCC, Appamasamudhram. • Inert and Silt 0.3 TPD stored along with C&D waste. Used for Filling Low Lying Areas **Proposed Plan of Action:** • Wet Waste of 4 TPD are proposed as below: Micro Composting Plant – 3Nos. of 8 TPD (Will be completed before April 2019-SBM Funds) ❖ **Attur Municipality** • No. of MSW dumping points identified: Nil • Population: 65200 • Qty of MSW Generated: Wet waste: 10 TPD Dry waste: 8 TPD Total: 18 TPD MSW Collection – 90%	Municipal Administration	Apr-2019

		MSW Segregation – 84% Present Treatment Method: Wet waste: Nil Dry waste: 8 TPD • Other saleable waste (Plastic, Rubber, Metal etc.,) of 4.8 Tonne sold out to the identified vendors & registers are being maintained. • The Non saleable Non Biodegradable waste of 2.4 TPD is stored in the earmarked location at Thennakudipalayam. • Inert and Silt 0.8 TPD stored along with C&D waste. Used for Filling Low Lying Areas **Proposed Plan of Action:** • Wet Waste of 10 TPD are proposed as below: Micro Composting Plant – 5Nos. of 15TPD (Will be completed before April 2019-SBM Funds) ❖ **Pethanaickenpalayam Town Panchayat** • No. of MSW dumping points identified: 1 • Population: 17678 • Qty of MSW Generated: 2.83 TPD Source Collection & Segregation – Yes Treatment method: Windrow composting	Directorate of Town Panchayat	Apr-2019

		Present Mode of MSW Disposal: o Wet Waste of 1.330 TPD are processed by Windrow Composting method. o Dry Waste – 0.916 TPD o Recycable waste (plastic, metal, rubber etc., 0.150 TPD sold out to the identified vendors. o The Non Recycable waste of 1.330 TPD periodically disposed. o Inerts & Silt -0.580 TPD Used in Filling Low Lying Areas. **Plan of Action:** Work under progress at an estimate cost of RS.60 Lakh for Providing Protection Compound Wall and additional Windrow Platform with Shed under SBM fund. ❖ **Yethapur Town Panchayat** • No. of MSW dumping points identified: 1 • Population: 11626 • Qty of MSW Generated: 2.90 TPD Source Collection & Segregation – Yes Treatment method: Windrow & Vermi composting **Present mode of MSW Disposal:** • Wet Waste of 1.670 TPD are processed by Windrow Compost method.	Directorate of Town Panchayat	Dec-2020

		• Dry Waste – 1.010 TPD • Recycable waste (plastic, metal, rubber etc., 0.24 TPD sold out to the identified vendors. • Inerts & Silt -0.420 TPD Used in Filling Low Lying Areas. **Plan of Action:** Work under progress at an estimate cost of RS.100 Lakh for Providing Protection Wall, Compound Wall, additional Windrow Platform with Shed, and Bio Mininig for disposal of Historical waste under SBM fund. ❖ **Belur Town Panchayat** • No. of MSW dumping points identified: 1 • Population: 9260 • Qty of MSW Generated: 1.75 TPD Source Collection & Segregation – Yes Treatment method: Windrow composting **Present mode of MSW Disposal:** • Wet Waste of 1.75 TPD are processed by Windrow Compost method. • Dry Waste – 0.300 TPD o Recycable waste (plastic, metal, rubber etc., 0.075 TPD sold out to the identified vendors.	Directorate of Town Panchayat	Dec-2019

		○ The Non Recycable waste of 0.225 TPD periodically disposed. ○ Inerts & Silt 0.410 TPD Used in Filling Low Lying Areas. **Plan of Action: Nil** MSW treatment facility provided. • Collection, segregation, treatment, disposal are under implementation in accordance with Municipal Solid Waste management Rules 2016. ❖ **Manivilundhan Village Panchayat** • No. of MSW dumping points identified: Nil • Population: 12115 • Qty of MSW generated: 4.84 TPD • Source Collection & Segregation – Yes • Treatment method: ➢ **Bio-Degradable Waste:** Dumped in the compost pits and Cow dung are being sprayed at regular intervals and it becomes manure after 30 days and sold to the farmers. ➢ **Non Bio – Degradable Waste:** Segregated glass, Plastic bottles, Covers, Iron, Aluminium foil sheets etc., once in 15 days and sold to the local merchants.	Rural Development & Panchayat Raj	-

		• **Plan of Action: Nil** MSW treatment facility provided ❖ **Thiyaganur Village Panchayat** • No. of MSW dumping points identified: Nil • Population: 2234 • Qty of MSW generated: 0.89 TPD • Source Collection & Segregation – Yes • Treatment method: ➢ **Bio-Degradable Waste:** Dumped in the compost pits and Cow dung are being sprayed at regular intervals and it becomes manure after 30 days and sold to the farmers. ➢ **Non Bio – Degradable Waste:** Segregated glass, Plastic bottles, Covers, Iron, Aluminium foil sheets etc., once in 15 days and sold to the local merchants. • **Plan of Action: Nil** MSW treatment facility provided	Rural Development & Panchayat Raj	-
4.	Environmental Flow (E-flow) and Irrigation Practices	➢ Flow is only in the rainy season/Heavy rain. During the monsoon period at flood time the maximum flood discharge in the River is 3243 cusecs. Vasista river on Nov 2010 and May 2018. Vasista river is	PWD-WRD and Irrigation Department.	-

		polluted from Attur to Kattukottai stretch (7km) due to the Attur Municipal sewage wastes into the river.		
5.	Ground Water Quality	Generally the ground water quality is poor - Nickel and Copper level are above the prescribed standards.	State Ground Water Authority, CGWB	-
6.	Flood Plain Zone (FPZ)	➢ Plantation and Biodiversity parks will be formed after demarcation of FPZ and removal of encroachment with the help of Revenue Department.	PWD-WRD, Forest Department	-
7.	Encroachments along the river bank	➢ Demarcation of encroachments will be identified with the help of revenue department. Notice has been issued and some encroachments has been evicted. ➢ Name of reach : Attur to Thalaivasal ➢ Village: Narasingapuram ➢ No. of Encroachment: 271 ➢ Extent of encroachment (in Ha)- 7.51 ➢ Encroachment Evicted - 211. Encroachments identified with the help of revenue department. Notice has been issued and 211 Nos encroachments have been evicted in Vasista River and for balance notice has been issued.	PWD-WRD and Revenue Department	-

15.0 Conclusion:

River Vasista is not a Perennial River. There is no industrial effluent discharge into the River. Only sewage is discharged in certain areas from the local bodies viz Attur, Narasingapuram Municipalities, Pethanaicken palayam,Yethapur & Belur Town Panchayats.

River Vasista is categorized as polluted River stretch under priority-I. The report of analysis of the River Water collected at Anaimedu Reservoir, Auttur (Down-Stream) and Thalaivasal River (Down-Stream) reveals that the D.O level is nil and it also shows the presence of high level of Fecal Coliforms which is due to the sewage discharge from the above said local bodies.

The quality of River water can be improved with the following measures:

- ✓ Attur & Narasingapuram Municipalities, Pethanaickenpalayam, Yethapur & Belur Town Panchayats, shall provide treatment plants within the time frame as per the action plan and shall ensure that the entire sewage generated from the local body is treated and disposed off scientifically.
- ✓ Attur & Narasingapuram Municipalities, Pethanaickenpalayam, Yethapur & Belur Town Panchayats shall complete the establishment of the solid waste treatment facility within the time frame and shall ensure that the entire solid waste generated from the local body area including solid waste dumped along the River Bank is treated and disposed off scientifically.
- ✓ TNPCB shall ensure that no discharge of trade effluent from the Sago units at any point of time.
- ✓ PWD-WRD and Revenue Department shall ensure that no encroachments along the river banks.

ANNEXURE-I			
M/s. HATSUN AGRO PRODUCT LTD, DAIRY DIVISION,THALAIVASAL, DAIRY DIVISION,THALAIVASAL			
Treated Effluent ROA Report for the Month of September-2018			
S.No	**Parameters**	**Units**	**Treated Effluent**
1	pH		7.40
2	Total Suspended Solids	mg/l	16
3	Total Dissolved Solids	mg/l	996
4	Chloride	mg/l	380
5	Sulphate	mg/l	29
6	Oil & Grease	mg/l	<4
7	Biochemical oxygen Demand(BOD)	mg/l	23
8	Chemical Oxygen Demand(COD)	mg/l	96

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ANNEXURE-I

M/s. HATSUN AGRO PRODUCT LTD, DAIRY DIVISION,THALAIVASAL, Surrounding Sample ROA Report for the Month of June-2018

S.No	Parameters	Units	Piezometric Bore well (Near wood shed)	Piezometric Bore well (Irrigation Land)	Primary School(Openwell)	V.Senthilkumar (Openwell)	Gopal (Openwell)	Athiyappan (Openwell)
1	Conductivity	Number	1590	1850	760	1660	1080	1380
2	pH	mg/l	6.92	7.65	7.17	6.93	7.19	7.79
3	Total Dissolved Solids (TDS)	mg/l	948	1116	592	1128	672	836
4	Chloride as Cl	mg/l	149	427	202	496	173	248
5	Sulphate as SO4	mg/l	31	20	46	23	79	87
6	Biochemical oxygen Demand(BOD)	mg/l	<2	<2	<2	<2	<2	<2
7	Chemical Oxygen Demand(COD)	mg/l	16	16	16	16	16	16
8	Fluoride as F	mg/l	<1	<1	<1	<1	<1	<1
9	Total Hardness as CaCO3	mg/l	380	164	340	712	352	384
10	Calcium as Ca	mg/l	138	32	78	257	71	56
11	Magnesium as Mg	mg/l	9	20	35	17	42	59
12	Sodium as Na	mg/l	160	360	70	65	58	150
13	Potassium as K	mg/l	3	5	3	3	4	4
14	Iron total as Fe	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
15	Alkalinity as CaCO3	mg/l	296	240	148	84	128	156

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Annexure - II

SCHEDULE-VI: ENVIRONMENT (PROTECTION) RULES, 1986

(See rule 3A of E (P) Rules, 1986)

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS PART-A: EFFLUENTS

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land for Irrigation	Marine coastal areas
1	2	3(a)	3(b)	3 (c)	3 (d)
1	Colour and odour	See 6 of Annexure-I	-	See 6 of Annexure-I	See 6 of Annexure-I
2	Suspended solids mg/l Max.	100	600	200	(a) For process waste water -100 (b)For cooling water effluent 10 % above total suspended matter of influent
3	Particle size of suspended solids	shall pass 850 micron IS Sieve	-		(a) Floatable solids, max 3 mm. (b)Settleable solids, max 850 microns
4	[*Omitted*]				
5	pH value	5.5 to 9	5.5 to 9	5.5 to 9	5.5 to 9
6	Temperature	Shall not exceed 5°C above the receiving water temperature	-	-	Shall not exceed 5°C above the receiving water temperature
7	Oil and grease mg/l, Max	10	20	10	20
8	Total residual chlorine mg/l, Max	1.0	-	-	1.0
9	Ammonical nitrogen (as N) mg/l, Max	50	50	-	50
10	Total Kjeldahl nitrogen (as NH_3) mg/l, Max	100	-	-	100
11	Free ammonia [as NH_3] mg/l, Max	5.0	-	-	5.0
12	Biochemical Oxygen Demand (3 days at 27°C)] mg/l, Max	30	350	100	100
13	Chemical Oxygen Demand, mg/l Max	250	-	-	250
14	Arsenic (as As) mg/l, Max	0.2	0.2	0.2	0.2
15	Mercury (as Hg), mg/l, Max	0.01	0.01	-	0.01
16	Lead (as Pb) mg/l Max	0.1	1.0	-	2.0
17	Cadmium (as Cd) mg/l, Max	2.0	1.0	-	2.0
18	Hexavalent Chromium (as Cr^{+6}) mg/l, Max	0.1	2.0	-	1.0
19	Total chromium (as Cr) mg/l, Max	2.0	2.0	-	2.0

Annexure - II

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land for Irrigation	Marine coastal areas
20	Copper (as Cu) mg/l Max	3.0	3.0	-	3.0
21	Zinc (as Zn) mg/l, Max	5.0	15	-	15
22	Selenium (as Se) mg/l Max	0.05	0.05	-	0.05
23	Nickel (as Ni) mg/l, Max	3.0	3.0	-	5.0
24	Omitted	*	*	*	*
25	Omitted	*	*	*	*
26	Omitted	*	*	*	*
27	Cyanide (as CN) mg/l ,Max	0.2	2.0	0.2	0.2
28	Omitted	*	*	*	*
29	Fluoride (as F) mg/l, Max	2.0	15	-	15
30	Dissolved Phosphates (as P) mg/l, Max	5.0	-	-	-
31	Omitted	*	*	*	*
32	Sulphide (as S) mg/l Max	2.0	-	-	5.0
33	Phenolic compounds [as C_6H_5OH] mg/l, Max	1.0	5.0	-	5.0
34	Radioactive materials				
	(a) Alpha emitters [Micro curie/ml] max	10^{-7}	10^{-7}	10^{-8}	10^{-7}
	(b) Beta emitters [Micro curie/ml] Max	10^{-6}	10^{-6}	10^{-7}	10^{-6}
35	Bio-assay test	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent
36	Manganese (as Mn)	2 mg/l	2 mg/l	-	2 mg/l
37	Iron (as Fe)	3 mg/l	3 mg/l	-	3 mg/l
38	Vanadium (as V)	0.2 mg/l	0.2 mg/l	-	0.2 mg/l
39	Nitrate Nitrogen	10 mg/l	-	-	20 mg/l
40	Omitted	*	*	*	*

* Omitted by Rule 2 (d) (i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No. G.S.R 801 (E), dated 31.12.1993

Annexure - III

Water Quality Criteria -Designated Best Uses of Water

Designated Best Use	Class	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	1.Total Coliforms Organism MPN/100ml shall be 50 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 6mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Outdoor bathing (Organised)	B	1.Total Coliforms Organism MPN/100ml shall be 500 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 5mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	1.Total Coliforms Organism MPN/100ml shall be 5000 or less 2. pH between 6 and 9 3. Dissolved Oxygen 4mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Propagation of Wild life and Fisheries	D	1. pH between 6.5 and 8.5 2. Dissolved Oxygen 4mg/l or more 3. Free Ammonia (as N)-1.2 mg/l or less 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	1. pH between 6.0 and 8.5 2. Electrical Conductivity at 25 °C micro mhos/cm, maximum 2250 3. Sodium absorption Ratio Max. 26 4. Boron Max. 2mg/l
	Below-E	Not meeting any of the A, B, C, D & E Criteria

BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE AT CHENNAI

Appeal No. 77 of 2022

M/s. Varalakshmi Starch Industries (P) Ltd.,
Rep. by its Managing Director V.Anbalagan
Having its office at:
"Varalakshmi Tower"
No.127/1, 2nd floor,
Gandhi Road,
Salem- 636 007. ...Appellant

AND

Tamil Nadu Pollution Control Board
Rep. by its Chairperson
76, Anna Salai, Guindy Industrial Estate,
Guindy,
Chennai – 600032 & Ors., ...Respondents,

AFFIDAVIT ALONG WITH ANNEXURES