BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No. 268 of 2016 (SZ)

Korattur People's Welfare & Awareness
Trust Represented by Mr. S. Sekaran Founder
and Managing Trustee
Registered Office at: Door No.04, 5th Main Road,
Ellai Amman Nagar,
Korattur, Chennai – 600 076.

...Applicant(s)

Vs

Government of India,
Rep. by its Secretary, Ministry of Environment,
Forests & Climate Change, Central Secretariat,
Indira Paryawaran Bhavan, Jorbagh Road,
New Delhi and Ors.

...Respondents

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Filed by
Thiru. C. Kasirajan,
Advocate, Chennai.

TAMIL NADU POLLUTION CONTROL BOARD REPORT AS PER THE HON'BLE NATIONAL GREEN TRIBUNAL(SZ),CHENNAI ORDER DATED 19/11/2020 IN O.A.NO.268 OF 2016.

Submitted to

Hon'ble National Green Tribunal (SZ)

Chennai

March 2021

1. Preamble

Ambattur is an industrial town located at the north-west of the Chennai city which comes under the administrative jurisdiction of Chennai District. SIDCO industrial estate, Ambattur is located in Zone – 7 (Ambattur) of Corporation of Chennai. Ambattur Lake and Korattur Lake are the two major lakes located within the limit of Zone – 7 (Ambattur) of Corporation of Chennai. Ambattur Lake is located at south west corner of the Ambattur (Corporation of Chennai) area and Korattur Lake is located northern side of Ambattur (Corporation of Chennai) area. A canal called Ambattur lake surplus canal which flows through SIDCO Industrial Estate is used to discharge the surplus water from the Ambattur Lake to Korattur Lake during monsoon season through two culverts one near DTP colony in the western end of the lake and another at Eastern end of the lake.

The untreated and partially treated domestic sewage generated from Thirumullaivoyal, Annanur and Ayapakkam areas of Thiruvallur District finds way to Ambattur Lake through various storm water drains. This sewage along with the domestic sewage generated from the Ambattur (Corporation of Chennai) areas such as MKB Nagar, Teachers Colony, Dobhi Colony, Ramapuram, Alagesannagar, Gnanamoorthy Nagar, Pattaravakkam, Meenambedu, Karukku, Mannurpet, and Mangalapuram flows through Ambattur lake surplus canal which traverse through Ambattur Industrial Estate (North Phase).

The total extent of the SIDCO Industrial Estate, Ambattur is 1430 acres. On the Northern side, the industrial estate is bounded by the Chennai–Arakkonam railway line followed by Korattur Lake and the other three sides are surrounded by residential and commercial areas of Zone 7 (Ambattur) of Corporation of Chennai. The north phase of the estate is sloping towards northeast (i.e. towards Korattur area), and the southern phase of the industrial estate is sloping towards south.

Total 2976 industrial sheds/plots are located in Ambattur Industrial Estate. Most of these industries are small scale light engineering units and are carrying out dry operations like fabrication/machining of auto & Industrial equipments. Some of the engineering units also carry out surface treatment activities like electroplating, phosphating, and powder coating and these activities generate trade effluent. Other type of industries located in the estate are castings, heat treatment, forging,

garments, and electrical equipment manufacturing etc. The trade effluent generated from the industries located in this estate is typically acidic in nature and may contain heavy metals like zinc, copper, chromium, nickel, etc. Out of the total industries located in Ambattur Industrial Estate, only 61 industries in south phase and 125 industries in north phase are trade effluent generating units.

For the management of sewage generated from the industrial units, in Ambattur Industrial Estate, SIDCO has installed two Common Sewage Treatment Plants (CSTP-2 MLD capacity plant at North Phase and 3 MLD capacity plant at South Phase). The operation and maintenance of both CSTPs is being carried out by M/s. Chennai Auto Ancillary Industrial Infrastructure Upgradation Company (CAAIIUC).

Other than SIDCO industrial estate, some small industrial estates such as TASS Industrial Estate, Patavatamman Estate & Tiny shed industrial units are located within & adjacent to SIDCO Industrial Estate, Ambattur which have no underground sewer system and the CMWSSB has furnished action plan to provide underground sewer system. Further, CMWSSB has also furnished action plan to provide underground sewer to un sewered areas such as MKB Nagar, Teachers Colony, Dobhi Colony, Ramapuram, Alagesannagar, Gnanamoorthy Nagar, Pattaravakkam, Meenambedu, Karukku, Mannurpet and Mangalapuram.

Earlier, all the trade effluent generating units had provided individual Effluent Treatment Plant (ETP) followed by either facilities for reuse or Solar Evaporation Pans (SEPs). Many trade effluent generating units are small scale industries carrying out surface treatment. As the small scale individual units found difficult to operate the ETP efficiently due to lack of skilled manpower and as the SEPs were found overflowing or seeping occasionally, it was proposed to have a full-fledged common ETP with modern facilities for treatment and reuse of trade effluent generated by these industries. In this regard, M/s. JBR Technologies Pvt. Ltd has entered with an tripartite agreement lease with M/s. Tamilnadu Small Industries Development Corporation Limited (TANSIDCO) and with M/s. Ambattur Industrial Estate Manufacturers Associations (AIEMA) and provided CETP with zero liquid discharge system for treatment of trade effluent from the surface treatment industrial units located in the Ambattur Industrial Estate (North Phase & South Phase) engaged in electroplating and allied activities which is functioning since July 2019.

All the small scale trade effluent generating surface treatment units made agreement with M/s. JBR Technologies Pvt. Ltd for the disposal of trade effluent generated. Further, all these units dismantled the individual ETPs already provided within the premises and now provided only the collection tank with 3 days storage capacity. Presently the CETP is collecting the trade effluent from the member units located in the SIDCO Industrial Estate through dedicated tanker lorries operated with GPS tracking system for treatment. The RO permeate is reused in the member units and the final RO reject is evaporated through Multiple Effect Evaporator (MEE). No trade effluent is discharged outside the premises and hence the CETP/member units are achieving Zero Liquid Discharge System. Hence, there is no discharge of either treated / untreated trade effluent into storm water drain / Ambattur surplus canal.

CAAIIUC has identified two locations in south phase and north phase of SIDCO, in 2MLD and 3MLD CSTP's plant with an area of 4500 sq.ft in each location for storage of non hazardous solid wastes generated from the industrial estate. Collected non hazardous solid waste is being handed over to Greater Chennai Corporation for further processing.

Meanwhile, the Korattur People's Welfare & Awareness Trust had filed an application before the Hon'ble National Green Tribunal (SZ) in application no.268 of 2016 with a prayer to restrain untreated effluent from industries and sewage from household activities directly letting into the Korattur Lake through the canals or in any manner. Thereafter the case has been adjourned from time to time and subsequently as per order dated 12.12.2019, the Tribunal has constituted a joint committee which has filed final report to the Tribunal on 19.11.2020.

2. Order of the Hon'ble Tribunal

It is respectively submitted that in the above matter, the Hon'ble NGT in its order dated 19.11.2020 has noted and directed interalia that

"10. learned counsel appearing for the applicant submitted that though earlier the unauthorized sewage connections were blocked and also the electricity connections were disconnected in respect of certain industries but due to political pressure, the same have been opened and the unauthorized industries are still working with the same method of discharge as was been done earlier causing pollution to the river.

11. It is also seen from the subsequent newspaper report published in The Time of India dated 10.12.2019 that the sewage is being let into the Korattur Lake.

12 The learned counsel appearing for the applicant also showed some photographs taken by the residents of the locality which showed the pathetic contaminated condition of the water on account of discharge of untreated effluents into those drains by the industrial units.

13. The Pollution Control Board as well as the committee are directed to look into these issue as well and incorporate the action taken in respect of the same to remove the contaminated water and steps taken to improve the water quality in the areas affected by the same and action taken against those persons who are responsible for such illegal activities in the report to be filed.

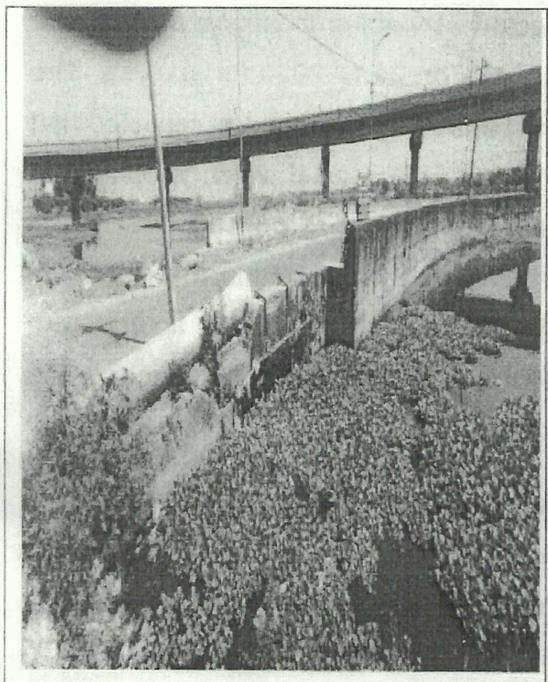
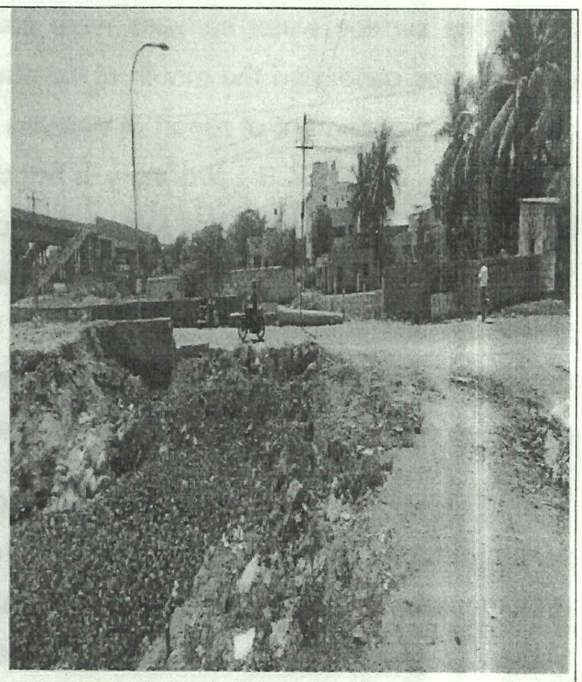
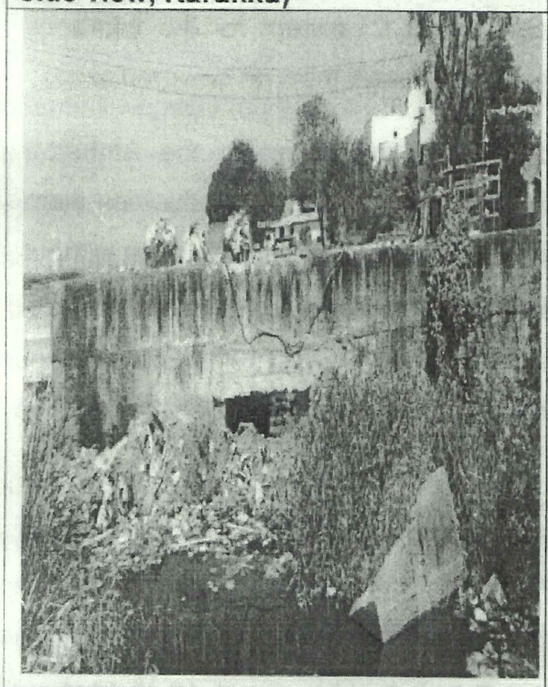
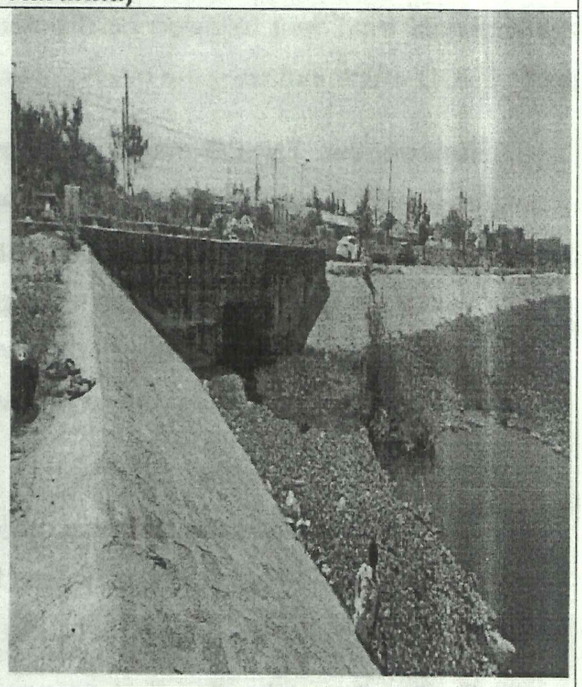
14. The committee as well as the respective stakeholders namely, Tamil Nadu Pollution Control Board (TNPCB), Industrial Estate, Avadi Municipal Corporation, Greater Chennai Corporation, Chennai Metropolitan Water Supply Sewerage Board (CMWSSB), Public Works Department (PWD), CETP operator and Additional Secretary, Municipal Administration and Water Supply Department, State of Tamil Nadu, Member Secretary, Public Works Department (PWD), State of Tamil Nadu to submit their further progress of the work, action taken and further proposal for improving the situation within shorter time line required for completion of the same in an effective manner on or before 17.02.2021".

The copy of the above order is enclosed as Annexure-I.

The hearing has been posted further on 18.03.2021.

3. Inspection by TNPC Board

As directed by the Tribunal, the Ambattur Lake surplus canal and the mouth of Korattur Lake were inspected by the officials of TNPCB on 24.12.2020 & 04.02.2021. During inspection, it was observed that both the inlets at the Eastern and Western ends of the Korattur Lake were found to be plugged as shown in the following photographs.There is no water let into Korattur Lake from Ambattur Lake surplus canal.

	
Ambattur Surplus Canal western entry point to Korattur Lake (Entry side view, Karukku)	Ambattur Surplus Canal western entry point to Korattur Lake (Lake side view, Karukku)
	
Ambattur Surplus Canal Eastern entry point to Korattur Lake (Entry side view)	Ambattur Surplus Canal Eastern entry point to Korattur lake (Lake side view)

The surface water samples were collected at various locations of Ambattur Lake surplus canal and the mouth of Korattur Lake on 24.12.2020 for analysis. The consolidated statement of report of analysis of surface water samples collected and analysed by the TNPCB Laboratory is attached as **Annexure-II** which is compared within the tolerance limits for Inland surface water subject to pollution (IS: 2296-1982). From the results, it is found that the heavy metals are within the standards prescribed for the Inland surface water (Class C- Drinking water source with conventional treatment followed by disinfection), which revealed that there is no discharge of industrial effluent into the Ambattur surplus canal.

Further, it is found that the Biological Oxygen Demand (BOD) values are varied in the samples in the range of 5 to 144 mg/L, the Chemical Oxygen Demand (COD) values are varied in the samples in the range of 32 - 376 mg/L and the Total Coliform & Faecal Coliform present in the samples are varied in the range of 40 to 1100 and <1.8 - 140 MPN/100 ml respectively. From the results, it is found that the water sample is meeting the standards prescribed for drinking water source with conventional treatment followed by disinfection (Class C) except for the tolerance limit of BOD which indicates the mixing of untreated sewage from un sewered areas.

Further, the TNPCB had conducted surprise inspection in the Ambattur Industrial Estate & abutting areas and based on the inspection, 32 industries were issued with directions for closure and stoppage of power supply for operating without consent from the Board and for non - compliance of the conditions stipulated in the consent orders issued. Subsequently, the revocation of closure orders were issued to these industries only after the compliance of the conditions mentioned in the closure direction.

It is respectively submitted that no unauthorized industries are still working with the same method of discharge as was been done earlier causing pollution to the water bodies.

Further it is submitted that as per the Tribunal order dated 12.12.2019, a special team was formed consisting of 10 TNPCB Engineers to carry out inspection from 2.1.2020 and have inspected all the 2976 industries. Out of these 2976 industries, 849 industries have applied and obtained consent, 255 industries have closed and vacated their premises, 197 sheds are godowns and the

remaining 1675 no of industries have been categorized under white category as per TNPCB BP.No.06 dated 02.08.2016 which are not required to obtain consent of the Board as per CPCB revised categorization.

Out of 1675 white category units, 891 industries are involved in machining operations using CNC machines which use coolant diluted with water (95% water and 5% coolant) for the purpose of cooling during machining operation. These machining industries do not generate waste on a daily basis. Coolant water is being re-circulated and once it has become contaminated, the waste coolant is let out. The frequency of letting of coolant varies between once in 3 month /6 months/one year/ 2 years and the quantity varies between 10 Litres / annum to 1000 Litres/annum.

The CAAIIUC has provided 2 Nos. mobile treatment systems for reuse of coolant water and ordered for another two machines. Based on the requirements, CAAIIUC is planning to increase the mobile treatment systems. Industries have been instructed by the TNPCB to make use of mobile system to treat and reuse the coolant water.

Those units have been strictly instructed by the TNPCB not to dispose the coolant water either in the sewer or any other water source and to store the coolant in barrels as and when generated and recycle the same after treating in the mobile system provided by CAAIIUC.

As CAAIIUC has provided mobile filtration units for coolant water to the micro and small scale member units (891 Nos. of white category industries) in Ambattur Industrial Estate and as the CAAIIUC takes the responsibility of treatment and reuse of coolant water from the member units, those units need not obtain consent of the Board, provided, the CAAIIUC shall ensure that the coolant generated from these industries are not disposed outside the premises either in the sewer / storm water drain or on land under any circumstances.

4. Status of Progress of the improvement works proposed by CAAIUC/TASS Industrial Estate/M/s JBR Technologies

Action taken report on the short term and long term action plans as furnished by CAAIUC/TASS Industrial Estate/M/s JBR Technologies and the

present status of verification of compliance by TNPC Board is submitted as **Annexure III.**

It is respectively submitted that as there is no industrial discharge into the Ambattur surplus canal leading to Korattur Lake, the unauthorized discharge of sewage into this canal to be curtailed to avoid contamination of Korattur Lake. For which, the CMWSSB has to implement and complete the un sewered areas in the surrounding locality from where the sewage is disposed into the canal, with sewer connectivity early.

8/3/2021

District Environmental engineer
Tamil Nadu Pollution Control Board,
Ambattur

Joint Chief Environmental Engineer (M),
Tamil Nadu Pollution Control Board,
Chennai Zone

ANNEXURE - I

Item No.2:

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No.268 of 2016 (SZ)

(Through Video Conference)

IN THE MATTER OF:

Korattur People's Welfare & Awareness Trust
Represented by Mr. S. Sekaran
Founder and Managing Trustee
Registered Office at:
Door No.04, 5th Main Road, Ellai Amman Nagar,
Korattur, Chennai – 600 076.

...Applicant(s)

Versus

Government of India,
Rep. by its Secretary,
Ministry of Environment, Forests & Climate Change,
Central Secretariat,
Indira Paryawaran Bhavan, Jorbagh Road,
New Delhi and Ors.

...Respondent(s)

Date of hearing: 19.11.2020.

CORAM:

HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER

HON'BLE MR. SAIBAL DASGUPTA, EXPERT MEMBER

For Applicant(s): Smt. D. Kamatchi.

For Respondent(s): Smt. M. Sumathi for R1.
Sri. M. Mani Gopi for R2 to R5.
Smt. P.T. Ramadevi through
Sri. Raghul Adhithya for R6 to R8.
Sri. G. Janakiraman for R9.

Sri. C. Kasirajan through
M/s. Meena for R10.
Sri. R. Saravana Kumar for R11,
R13 to R16 & R18.

ORDER

1. As per order dated 12.12.2019, this Tribunal had constituted a Joint Committee to evaluate the situation narrated by the applicant in the application and directed them to submit a periodical report regarding the steps taken for mitigating the situation of pollution caused to Korattur Lake and the matter is being adjourned from time to time for getting the report.

2. When the matter came up for hearing today through Video Conference, Smt. D. Kamatchi represented the applicant. Smt. M. Sumathi represented 1st respondent, Sri. M. Mani Gopi represented respondents 2 to 5, Smt. P.T. Ramadevi through Sri. Raghul Adhithya represented respondents 6 to 8, Sri. G.Janakiraman represented 9th respondent, Sri. C. Kasirajan through M/s. Meena represented 10th respondent and Sri. R. Saravanakumar represented respondents 11, 13 to 16 & 18.

3. The Joint Committee has submitted the report which reads as follows:-

1. PREAMBLE

The Korattur People's Welfare & Awareness Trust had filed an application before the Hon'ble National Green Tribunal (SZ) in application no.268 of 2016 with a prayer to restrain untreated effluent from industries directly letting into the Korattur Lake through the canals or in any manner.

The Hon'ble NGT in its order dated 13.12.2016 directed the District Administration, Revenue Dept, PWD & TNPCB to plug the passage created for the purpose of sending the trade effluent to Korattur Lake. Further, the Hon'ble NGT in its order dated 19.09.2017 has directed the Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB) to file a report to control discharging the untreated sewage into Ambattur surplus cannel and also directed the TNPCB to furnish detailed report of industrial units viz the number of industries which are operating with Consent and without consent and the number of industries which are closed due to violations of the provisions of water (P&CP) Act 1974 and Air (P &CP) Act, 1981 in its order dated 06.12.2017.

Thereafter the matter has been adjourned from time to time. Currently, the applicant again brought to the notice of Hon'ble NGT that the pathetic condition of the Lake is still continuing and the storm water drain has become the domestic discharge sewage drain and untreated sewage is being discharged into the Lake, thereby contaminating the water in the Lake.

2. **ORDERS OF THE HON'BLE NATIONAL GREEN TRIBUNAL**

In the matter of application no.268 of 2016 (SZ), Korattur people's welfare & awareness trust, Chennai vs Government of India, rep. by its Secretary, MoEF & CC & Ors, the Hon'ble National Green Tribunal vide its order dated 12.12.2019 has informed that though the matter is pending from 2016 onwards, no concrete steps have been taken by the authorities to solve the problem and the problem still continues and going from bad to worse and there is no proper action plan prepared by the authorities by coordinating with the responsible persons who will have to sit together to solve the issue as well to produce a final, effective solution to the problem.

There is responsibility on the local authorities to regulate the sewage system in the area before it is discharged into the river or water body. The State Government is also duty bound to take necessary steps to protect the environment so as to provide clean water, air and environment and ensure good health for the public, as part of right to life, as enshrined in Article 21 of the Constitution of India. The developments must go along with the protection of environment. If development alone is allowed to proceed with, ignoring the impact on environment, there will be none to enjoy the fruits of the same and as such sustainable development is a thing that has to be considered by the authorities while they are dealing with the development of environment. So there is a responsibility on the State to take remedial measures in coordination of all the departments which are responsible for keeping the health of the people in tact and making the environment clean. Mere projecting slogans, "clean environment" is not going to solve it. There must be comprehensive action plan to be prepared by the authorities to see that slogan has become a reality. So for that purpose, providing long time line in implementing the action plan, will only delay the project and affect the health of the people indirectly which cannot be allowed to continue.

Considering these circumstances, the Hon'ble National Green Tribunal in its order dated 12.12.2019 felt it appropriate to constitute a joint committee, consisting of (1) Principal Secretary for Urban Development Department, (2) Secretary, Public Works Department, (3) District Collector, Chennai, (4) Commissioner, Greater Chennai Corporation, (5) Senior Official of Metropolitan Water Supply & Sewage Board, (6) Senior Scientist/ Officer of Central Pollution Control Board, (7) Senior Officer/ Senior Scientist Tamil Nadu Pollution Control Board and (8) IIT, Chennai to consider the question involved in the matter and prepare an action plan to find a permanent solution for the issue and execution of the same with shorter time line". If the Principal Secretary's presence is not be possible, he is free to nominate an officer, not below the rank of Additional Secretary, who is well versed with the matter.

The Hon'ble National Green Tribunal in its order dated 27.02.2020 informed that the Principal Secretary, Municipal Administration and Water Supply Department have been substituted as joint committee member in the place of Principal Secretary for Urban Development Department. Copy of the orders dated 12.12.2019 and 27.02.2020 are enclosed as ***Annexure-I.***

3. ***SCOPE OF THE JOINT COMMITTEE AS DIRECTED BY HON'BLE NGT ORDER DATED 12.12.2019***

The Hon'ble National Green Tribunal has directed the joint committee to prepare the short term and long term action plan by considering the following and shall file the interim report regarding the progress of the action taken within a period of three months. The first meeting of the committee shall be convened on or before 31.12.2019 and post for consideration of the interim report on 31.03.2020.

Role of the Joint Committee

- *The committee shall go into the question of all the problems on account of the discharge of untreated sewage and other trade effluents into the Lake, particularly Korattur Lake and find out the deficiencies in the system and prepare an action plan to resolve the issue and execute the same with shorter time line as far as possible and submit a report to this Tribunal within a period of six months.*
- *The committee shall also go into the question regarding the damage caused to the environment on account of the unbridled discharge of sewage and trade effluents and the remedial measures to mitigate the damage caused to the environment and restore it to its original position and if necessary they can also identify the persons who are responsible for the same and assess environment compensation and recover the same from those persons who are responsible for the same in proportion to the contribution made by them applying "polluters pay" principle and submit a report in this regard as well.*
- *The committee can also consider as to whether the existing sewage treatment is sufficient and if not, whether additional establishment of sewage treatment with specific standard can be considered and that also can be incorporated in the action plan.*

Role of the TNPCB

- *The Tamil Nadu Pollution Control Board is also directed to inspect the industries, including the white category industries in that area and find out whether any violation is committed by them. If there is any violation, they will have to take appropriate action to abate the same and if any upgradation is required on account of pollution load in that*

area, that also will have to be considered by the State Pollution Control Board and appropriate change of category will have be restored and it will have to be brought under the consent mechanism, if it is required.

- *The State Pollution Control Board is also directed to consider the BOD,COD and faecal Coliform present in the water in that area in order to ascertain the quality of the water and find out whether they are complying the norms and whether the existing system is adequate to meet the situation. If not, proper alternate mechanism to meet the condition or standardisation of the STP to meet the situation has to be done. They are also directed to consider the criteria to ascertain the presence of dangerous metals, if any, which is likely to affect the human health.*
- *The Tamil Nadu State Pollution Control Board will be the Nodal Agency for coordination.*

Role of the Chief Secretary to Government

- *The Chief Secretary of the State shall monitor the same and intervene, if there is any intervention required and give necessary instructions to resolve the issue and come with proper effective action plan with shorter time line.*

Role of the Petitioner and stake holder

- *The petitioner and the association of industries and other stake holders are at liberty to submit their suggestions to remedy the situation to the above committee and the committee shall go into those aspects and prepare a comprehensive action plan.*

Suggestions made by the Petitioner

The petitioner Mr.S.Sekaran has made the following suggestions

1. *To inspect all the residential area from ward 79 to 87 of Zone -7 of Greater Chennai Corporation so as to verify the provision of sewer line. Action to be taken by the CMWSSB to provide sewer line to the unsewered areas.*
2. *TNPCB and PWD shall inspect and take action to stop the mixing of sewage from residential areas & industries, trade effluent from industries into the storm water drain. Action to be taken to provide sufficient ETP, STP by the industries and CSTP to the residential areas.*
3. *PWD shall desilt the Ambattur Lake surplus canal and Korattur Lake, so that during rainy season about 0.3 TMC water can be stored in the Lake, which can be further utilized.*
4. *The boundary of the Korattur Lake and the water catchment areas shall be earmarked as per "A- Register" and the same shall be fenced so as to remove the existing encroachments and to stop further encroachment. Copy of petitioner representation is enclosed in* ***Annexure – II.***

4. COMPOSITION OF THE COMMITTEE

The Hon'ble National Green Tribunal in its order dated 12.12.2019 and 27.02.2020 felt it appropriate to constitute a joint committee, consisting of (1) Principal Secretary for Municipal Administration and Water Supply Department, (2) Secretary, Public Works Department, (3) District Collector, Chennai, (4) Commissioner, Greater Chennai Corporation, (5) Senior Official of Metropolitan Water Supply & Sewage Board, (6) Senior Scientist/ Officer of Central Pollution Control Board, (7) Senior Officer/Senior Scientist Tamil Nadu Pollution Control Board and (8) IIT, Chennai.

In this regard, TNPCB has communicated a letter to the above said departments based on the Hon'ble NGT order dated 12.12.2019 and 27.02.2020 to nominate their member and also the TNPCB has sent the proposal and requested the Government for constitution of joint committee for preparation of action plan for restoration of Korattur Lake as per the Hon'ble NGT order dated 12.12.2019 and 27.02.2020. The Government vide GO.No.78 dated 01.06.2020, Environment and Forests (EC-1) Department has constituted the joint committee with the following officials for preparation of action plan for restoration of Korattue lake.

1. *The Additional Secretary to Government, E&F Department, Secretariat, Chennai*
2. *The Additional Secretary to Government, Municipal Administration and Water Supply Department, Secretariat, Chennai*
3. *The Special Secretary to Government, Public Works Department*
4. *The Commissioner, Greater Chennai Corporation, Chennai*
5. *The District Collector, Chennai District, Chennai*
6. *Mr.V.G.Ramaswami, Superintendent Engineer, Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB), Chennai*
7. *Dr.M.Madhusudanan, Regional Director (Chennai) and Mr.R.Rajkumar, Scientist-D, CPCB, Chennai*
8. *Dr.Ligy Philip, Professor, Dept of Civil Engineering, IIT Madras, Chennai*
9. *Mr.R.Ramasubbu, Joint Chief Environmental Engineer, TNPCB, Chennai*

5. PROGRESS OF THE ACTION TAKEN BY JOINT COMMITTEE

- *The first joint committee meeting conducted at Corporate Office, TNPCB, Chennai on 30.12.2019.*
- *The Chief Secretary to Government, Government of Tamilnadu convened a meeting on 03.01.2020 with line departments to resolve the issue and restoration of Korattur Lake. (copy of minutes of the meeting is enclosed as **Annexure – III**)*
- *The joint committee along with field officers has visited the Ambattur SIDCO industrial estate, Ambattur Lake, Korattur Lake, Ambattur surplus canal, Common Sewage Treatment Plants (South & North Phase), Common Effluent Treatment Plant (For Electroplating) and other private industrial estate on 10.01.2020 in order to assess / ascertain the discharge of sewage into Ambattur Lake surplus canal, disposal of Municipal Solid Waste and Hazardous Waste if any.*
- *The second joint committee meeting was convened with members at Corporate Office, TNPCB, Chennai on 05.02.2020 and discussed the action plans of line departments.*
- *The third joint committee meeting was convened with members at Corporate Office, TNPCB, Chennai on 13.02.2020 to finalize the action plans of line departments.*
- *The forth joint committee meeting was convened with members of Regional Director, CPCB, Chennai & Professor, IIT Chennai and a representative of CMDA at Corporate Office, TNPCB, Chennai on 19.02.2020 to evaluate the action plans furnished by the line department.*
- *The water samples were collected on 10.01.2020 at various locations in Ambattur Lake surplus canal and Korattur Lake.*
- *The mixed solid waste (Municipal solid waste and Hazardous waste) samples were collected on 10.01.2020 and soil samples were collected at various locations in Korattur Lake on 13.01.2020.*

- *The additional water and sludge samples were collected at Ambattur Lake, Korattur Lake, CSTPs and CETP on 11.02.2020 and 02.03.2020.*
- *The reference soil sample was collected at Dhanalakshmi Nagar, Korattur and Alamathi Eri on 13.02.2020 and water sample was collected at end of Ambattur surplus canal at Korattur (backside of CETP) (sample collected photographs are enclosed in **Annexure IV**).*
- *The fifth joint committee meeting was convened with members on 15.07.2020 through zoom app due to COVID-19 and instructed the line departments to submit the updated action plan so as to prepare the updated interim report*
- *The Chief Secretary to Government, Government of Tamilnadu convened a meeting on 08.09.2020 with line departments to review the action plan furnished by the stake holders and Joint Committee report for restoration of Korattur Lake. (copy of minutes of the meeting is enclosed as **Annexure – III**)*

All the samples were analysed by hiring the NABL accredited and MoEF & CC approved Environmental Laboratory of M/s.Glens Innovation Labs Pvt Ltd, Chennai to understand the characteristics of water, soil and solid waste.

6. DETAILED ANALYSIS OF ENVIRONMENTAL POLLUTION SOURCES AND ISSUES

Inspection was carried out by the team comprising of TNPCB, Greater Chennai Corporation, CMWSSB, PWD and SIDCO in the Ambattur Lake, Ambattur Lake surplus canal, Korattur Lake entry and zero point to ascertain the status of disposal of domestic sewage from households located in the upstream of the Korattur Lake and industrial sewage from industries located in SIDCO industrial estate, TASS industrial estate & Patavatamman estate and Tiny shed into Ambattur Lake, Ambattur Lake surplus canal and also to ascertain the status of disposal of trade effluent generated from the industries located in Ambattur SIDCO industrial estate, TASS Industrial Estate and Patavatamman estate & Tiny shed into Ambattur Lake surplus canal and Korattur Lake.

*Ambattur Lake is located at south west corner of the Greater Chennai Corporation area and the surplus water from Paruthipattu, Ayapakkam, Attheri and Arabatheri Lakes reaches the Ambattur Lake during monsoon season. The Ambattur Lake overflow is discharged via two surplus canals and finally these two are confluence as a single surplus canal at Teachers colony. Then the Ambattur surplus canal is passing through TASS Industrial Estate, Ambattur SIDCO Industrial Estate (North Phase) and finally reaches the Korattur Lake (Photographs of Discharge of sewage into Ambattur Lake, Ambattur Lake surplus canal and Korattur Lake is enclosed in **Annexure V**).*

Further the Joint Inspection team identified the following issues

i. *Domestic sewage of 0.59 MLD generated from Jothi Nagar, Cholambedu Main road, Ganapathi Nagar, Annai Sathya Nagar, Periyar Nagar and New Anna Nagar which are part of Avadi City Municipal Corporation is directly let into Ambattur Lake since these areas do not have UGSS.*
ii. *Domestic sewage of 45 MLD generated in Zone 7 from Depot 79 to 93 of Greater Chennai Corporation is discharged into Korattur Lake and Cooum River, since some of the areas have not provided with UGSS*

and in the areas with UGSS, the households are not yet connected with the system.

iii. *Sewage generated from the industries located in TASS Industrial Estate is discharged into Ambattur Lake surplus canal which finally reaches the Korattur Lake, since TASS Industrial Estate is not provided with UGSS.*

iv. *Sewage generated from the industries located in Patavatamman Industrial Estate & Tiny Sheds is directly discharged into Ambattur Lake surplus canal and reaches Korattur Lake since there is no UGSS.*

v. *The SIDCO has installed two Common Sewage Treatment Plants (CSTP) (2 MLD capacity at North Phase and 3 MLD capacity plant at South Phase) in Ambattur Industrial Estate for the management of sewage generated from the units located in Ambattur industrial estate. The operation and maintenance of both CSTPs is being carried out by M/s.Chennai Auto Ancillary Industrial Infrastructure Up gradation Company (CAAIIUC). Many of the units located in Ambattur industrial estate (both in North phase & South phase) are disposing their waste oil/coolant oil into underground sewer line and reaches the CSTPs. Due to this the treated sewage could not achieve the standard prescribed for discharge into water bodies at Mega & Metropolitan Cities by the Hon'ble NGT order dated 30.04.2019 in OA.No.1069/2018. Both the CSTPs have accumulated a total of 160 Tonnes of sludge in the premises.*

vi. *The unit of M/s.JBR Technologies Pvt. Ltd has provided the common effluent treatment plant (CETP) of 200 KLD capacity with ZLD for treating trade effluent from the member electroplating and allied units (Phosphating, Pickling etc.,). Currently the unit has provided the single stage RO system followed by Mechanical evaporator and the RO permeate is not reusable to industries because RO permeate is not meet out the quality of water to recycle in the electroplating units. The RO reject is further treated in the evaporator however the evaporator is not efficient. The unit has temporary stored the ETP sludge in open land within the premises for further handling.*

vii. *Mixed Solid waste (Municipal Solid waste and Hazardous wastes) of 3 tonnes was dumped in 15th Street, Sector-1 (Tiny sector), Ambattur Industrial Estate, South Phase.*

viii. *Mixed Solid waste (Municipal Solid waste and Hazardous wastes) of 7 tonnes was dumped in 9th Street, Sector-1 (Tiny sector), Ambattur Industrial Estate, North Phase (Photographs of mixed solid waste (municipal solid waste and hazardous waste) dumped locations in industrial estate is enclosed in* ***Annexure VI)****.*

ix. *The Municipal solid wastes generated from residences & industries located around the Ambattur Lake, Ambattur Lake surplus canal, Korattur Lake, TASS industrial estate, Patavatamman estate & Tiny sheds were being dumped haphazard in every corner of the streets and into the Ambattur Lake surplus canal.*

x. *The Municipal solid wastes generated from residences & industries located in and around the SIDCO Ambattur industrial estates were being dumped haphazard in the every corner of the streets located in the SIDCO Industrial area.*

xi. *Industrial hazardous waste such as grinding mud, oil soaked cotton waste, coolant oil generated from the industries are not handled properly and disposed inside the industrial estate in land, storm water lines.*

xii. *The Ambattur surplus canal is an earthen canal and in Ambattur surplus canal, hyacinths are fast growing and obstructing the free*

flow of water due to discharge of sewage. There is no regulator arrangement in both the inlets and weir-2 near North Avenue of Korattur Lake to control inundation during the rainy season.

xiii. *The Extent of Korattur Lake is 590 Acres. Nearly 75% of land area is covered by Hyacinths, Prosophis, juliflora, weeds and floating material etc., The Korattur Lake is having 8500 m peripheral length, out of which 6800 m length is having bund and the remaining portion of 1700 m is foreshore area. In the foreshore area encroachments are found in some places. Municipal solid waste and sewages from these encroachments are directly let into the Korattur Lake.*

7. DETAILS OF SAMPLING COLLECTION

The soil samples from Koratuur Lake, surface water samples from Ambattur Lake surplus canal, Korattur & Ambattur Lakes, mixed solid waste from the solid waste dumping at 15th Street, Sector-1 (Tiny sector), Ambattur Industrial Estate, South Phase and 9th Street, Sector-1 (Tiny sector), Ambattur Industrial Estate, North Phase. The sludge samples from CSTPs and effluent samples from CSTPs and CETP were collected from the following locations.

Type of sample and date of collection	***Location of samples collection***	***Number of samples***
Soil samples collected at Korattur Lake on 13.01.2020	*Soil samples were collected at a distance of 0m, 10m, 50m, 100m in Korattur Lake from Ondiveeran Koil*	*4*
	Soil samples were collected at a distance of 0m, 10m, 50m, 100m in Korattur Lake from Ondiveeran Koil (inlet)	*4*
	Soil samples were collected at a distance of 0m, 10m, 50m, 100m in Korattur Lake from Casa Grand Back Side	*4*
	Soil samples were collected at a distance of 0m, 10m, 50m, 100m in Korattur Lake from DTP Colony Inlet	*4*
	Soil sample was collected in Korattur Lake near Island, DTP canal, Thana Lakshmi Nagar, Ondiveeran Koil bund point and weir	*5*
Surface water (Ambattur Lake surplus canal and Korattur Lake) on 10.01.2020	*Water sample was collected at Surplus channel of Ambattur Lake at Annai Sathiya Nagar (13°06'293"N, 80°08'993"E)*	*1*
	Water sample was collected at Korattur Ahead of Surplus channel located between M.K.B Nagar& Teacher Colony (13°06'510"N, 80°08'864'E)	*1*
	Water sample was collected at Surplus channel after confluence- two Surplus channel of Ambattur Lake before entering into Industrial Estate (13°06'515"N, 80°09'480"E)	*1*

	Water sample was collected at Surplus Water sample collected from either channel in north place near Godrej animal feed unit (13°06'664"N, 80°09'814"E)	*1*
	Water sample was collected at Cut & Cover channel near polifit company (13°06'670"N, 80°09'810"E)	*1*
	Water sample was collected at DTP Colony channel near MMWSSB Pumpinng station(13°06'862"N, 80°10'043"E)	*1*
	Water sample was collected at Korattur Lake(Near DDP Colony) (13°06'858"N, 80°10'084"E)	*1*
	Water sample was collected at Korattur Surplus channel at 83 division housing board north avenue (13°06'627"N, 80°10'800"E)	*1*
Mixed solid waste (Municipal solid waste and Hazardous waste) samples on 10.01.2020	*The following samples were collected at Mixed Solid waste (Municipal Solid waste and Hazardous wastes) dumped in 15th Street, Sector-1 (Tiny sector), Ambattur Industrial Estate, South Phase* 1. *Stagnated oil (Lat 13.098306 Long 80.172473)* 2. *Solid Waste (Lat 13.098306 Long 80.172473)* 3. *Soil waste (Lat 13.098306 Long 80.172473)* 4. *Cotton waste (Lat 13.098306 Long 80.172473)*	*4*
	The Mixed Solid waste (Municipal Solid waste and Hazardous wastes) sample was collected at 9th Street, Sector-1 (Tiny sector), Ambattur Industrial Estate, North Phase (Lat 13.098306 Long 80.172473)	*1*
Surface water on 11.02.2020	*Water samples were collected at Ambattur and Korattur Lakes*	*4*
Water samples on 11.02.2020	*Water samples were collected at north phase CSTP, south phase CSTP and CETP*	*7*
Sludge samples on 11.02.2020	*Sludge samples were collected at north phase CSTP and south phase CSTP*	*2*
Reference Soil sample on 13.02.2020	*The reference soil sample was collected at Dhanalakshmi Nagar, Korattur (13°07'14.4"N, 80°10'31.3"E) and Alamathi Eri (13°12'23.4"N, 80°06'27.9"E)*	*2*

Water samples on 02.03.2020	*Water samples were collected at north phase CSTP and south phase CSTP*	*4*

The water samples were analyzed for physico-chemical properties and the analysis was carried out by standard method of APHA (2005) and heavy metals were analyzed by acid digestion and inductive coupled plasma Mass Spectroscopy (ICPMS).

8. ***SAMPLES ANALYSIS RESULT AND DISCUSSION***

a) ***Soil samples***

The surface soil samples were collected at various locations inside the Korattur Lake near Ondiveeran Koil, near Casa Grand Back Side, near Island, near DTP Canal, near Thana Lakshmi Nagar, near weir, near DTP Colony inlet and characteristics of soil samples are illustrated in Table 1 (Enclosed in ***Annexure VII****).*

From the results it is found that the surface soil samples collected at various locations inside Korattur Lake contains heavy metals in the range of such as Nickel (5.56-35.14 mg/kg), Copper (6.49-126.64 mg/kg), Chromium (10.81-231.45 mg/kg), Zinc (9.34-585.27 mg/kg) and Lead (3.28-25.86 mg/kg) which clearly indicated that the above said locations are having the heavy metals. It is ascertained that the contaminations due to the discharge of trade effluent from electroplating/pickling and metal surface units located in and around the SIDCO industrial estate and also the above said results confirmed that the Korattur Lake top soil having heavy metals. The assessment and remediation if any required for the soil in the Korattur Lake will be assessed after preparation of Detailed Project Report through an expert by Public Works Department.

The reference soil samples were collected at Dhanalakshmi Nagar, Korattur and Alamathi Eri, Tiruvallur and characteristics of soil samples are illustrated in Table 1 (Enclosed in ***Annexure VII****). From the results of analysis, it was found that the presence of heavy metals in Korattur Lake soil is higher than the reference soil.*

b) Illegally dumped Mixed Solid Waste (Municipal Solid Waste and Hazardous Waste)

The hazardous waste samples were collected in the illegal dumped locations of plot DP 2, SP119, Ambattur Industrial estate, South Phase, Chennai and 9th Street, North phase, Ambattur Industrial Estate, Chennai. The characteristics of heavy metals in the illegal dumped hazardous samples and comparison of hazardous waste standards as prescribed in the Schedule II of Hazardous and Other Waste (Management and Transboundary Movement) Rules 2016 are illustrated in Table 2 (Enclosed in ***Annexure VIII****).*

From the report of analysis of illegal dumped hazardous waste samples, it is found that the waste samples collected plot DP 2, SP119, Ambattur Industrial estate, South Phase, Chennai were contains Chromium heavy metal in the range of 5.42-23.16 mg/l which reveals that the above said parameter of chromium is exceeded the standard prescribed in the Schedule II of Hazardous and Other Waste (Management and Transboundary Movement) Rules

2016. It is ascertained that the contamination due to illegal dumping of hazardous waste from electroplating/pickling and metal surface units located in and around the SIDCO industrial estate.

The other parameters such as Arsenic, Barium, Silver, Cadmium, Selinium, Lead and mercury are within the standards prescribed in the Schedule II of Hazardous and Other Waste (Management and Transboundary Movement) Rules 2016. The illegal dumped hazardous waste in plot DP 2, SP119, Ambattur Industrial estate, South Phase, and 9th Street, North phase, Ambattur Industrial Estate are to be collected by the SIDCO / CAAIUC and shall dispose the same to TSDF, Gummidipoondi. The CAAIUC has submitted action plan for the removal of the wastes.

c) Ambattur Lake Surplus Canal Water samples for heavy metals and other parameters

*The water samples were collected at various locations of Ambattur Lake surplus canal located between Ambattur Lake and Korattur Lake on 10.01.2020. The collected sample is mixer of sewage and surface water and the characteristics of heavy metal and other parameters such as pH, DO, COD, BOD & Total Coliform presents in the water samples were compared with the tolerance limit for Inland surface water subject to pollution IS:2296-1982 are illustrated in Table 3 (Copy enclosed as **Annexure IX & X**). From the results, it is found that the heavy metals are within the standards prescribed by the Inland surface water (Class C-Drinking water source with conventional treatment followed by disinfection).*

From the report of analysis of surplus canal water samples collected at various locations in Ambattur Lake surplus canal, it is found that the Dissolved Oxygen (DO) is in the range of 2.16 – 6.95 mg/l at five locations and below limit of quantitation (BLQ) in three locations, the Biological Oxygen Demand (BOD) values are varied in the samples in the range of 14-81 mg/l, the Chemical Oxygen Demand (COD) values are varied in the samples in the range of 58.1-328 mg/l and the Faecal Coliform present the Ambattur surplus canal is varied in the range of 110 - 900 MPN/ 100 ml.

From the report of analysis of water samples collected at various locations in Ambattur surplus canal on 10.01.2020, it is found that the water is not meeting the standards prescribed for drinking water source with conventional treatment followed by disinfection (Class C).

d) Ambattur Lake water samples for heavy metal and other parameter analysis

*The water samples were collected in Ambattur Lake on 11.02.2020 and the characteristics of heavy metal and other parameters such as pH, DO, COD, BOD, TDS & Total Coliform presents in the water samples were compared with the tolerance limit for Inland surface water subject to pollution IS:2296-1982 are illustrated in Table 5 of **Annexure XI**. From the results, it is found that the heavy metals are within the standards prescribed by the Inland surface water (Class C-Drinking water source with conventional treatment followed by disinfection).*

From the report of analysis of water samples collected at various locations in Ambattur Lake, it is found that the DO level is varied in range of 4.56-4.9 mg/l, the value of Faecal coliform is varied in the range of 50-110 MPN/100 ml and the BOD value is varied in the range of 12-13 mg/l. From the report of analysis, it is found that the water is meeting the standards prescribed for drinking water source with conventional treatment followed by disinfection (Class C) except for the tolerance limit of BOD.

e) Korattur Lake water samples for heavy metal and other parameter analysis

The water samples were collected in Korattur Lake on 11.02.2020 and the characteristics of heavy metal and other parameters such as pH, DO, COD, BOD, TDS & Total Coliform presents in the water samples were compared with the tolerance limit for Inland surface water subject to pollution IS:2296-1982 are illustrated in Table 5 of ***Annexure XI****. From the results, it is found that the heavy metals are with the standards prescribed by the Inland surface water (Class C-Drinking water source with conventional treatment followed by disinfection).*

From the report of analysis of water samples collected at various locations in Korattur Lake, it is found that the DO level is varied in range of 4.09-4.36 mg/l, the value of Faecal coliform is varied in the range of 90-130 MPN/100 ml and the BOD value is varied in the range of 13-20 mg/l. From the report of analysis, it is found that the water is meeting the standards prescribed for drinking water source with conventional treatment followed by disinfection (Class C) except for the tolerance limit of BOD.

f) Water and sludge samples from Common Sewage Treatment Plant, North Phase

The sewage samples were collected in North phase of Common STP on 11.02.2020 and 02.03.2020. The characteristics of sewage samples are compared with inland surface water Parameters for discharge standards of trade effluent for heavy metals and with discharge of treated sewage into water bodies for other parameters at Mega & Metropolitan Cities by the Hon'ble NGT order dated 30.04.2019 in OA.No.1069/2018 are illustrated in Table 6 of ***Annexure XII****.*

From the report of analysis of raw and treated sewage samples collected in north phase CSTP, it is found that the parameters are within the standards prescribed for inland surface water Parameters for discharge standards of trade effluent for heavy metals. Also it is found that the other parameters of COD, BOD, TSS and Total Nitrogen values are exceeded in treated sewage compared with standards prescribed by discharge of treated sewage into water bodies for other parameters at Mega & Metropolitan Cities.

The dumped sludge sample was collected in North of Common STP on 11.02.2020 for heavy metal analysis. From the results it was found that the heavy metals are present in the sludge samples which indicate that the electroplating industrial effluents were discharged with raw sewage. The result of sludge analysis is illustrated in Table 6 of ***Annexure XII****.*

g) Water and sludge samples from Common Sewage Treatment Plant, South Phase

The sewage samples were collected in south phase of Common STP on 11.02.2020 and 02.03.2020. The characteristics of sewage samples are compared with inland surface water Parameters for discharge standards of trade effluent for heavy metals and with discharge of treated sewage into water bodies for other parameters at Mega & Metropolitan Cities by the Hon'ble NGT order dated 30.04.2019 in OA.No.1069/2018 are illustrated in Table 6 of ***Annexure XII****.*

From the report of analysis of raw and treated sewage samples collected in CSTP, it is found that the parameters are within the standards prescribed for inland surface water Parameters for discharge standards of trade effluent for heavy metals except Zinc in raw sewage (4.309 mg/l) which indicates that the zinc plating effluent is mixed with raw sewage. Also it is found that the other parameters of COD, BOD, Total Nitrogen, Total Phosphors and Faecal Coliform values are exceeded in treated sewage compared with standards prescribed by discharge of treated sewage into water bodies for other parameters at Mega & Metropolitan Cities.

The dumped sludge sample was collected in south phase of Common STP on 11.02.2020 for heavy metal analysis. From the results it was found that the heavy metals are present in the sludge samples which indicate that the electroplating industrial effluents were discharged with raw sewage. Hence the CAAIIUC has included the disposal of accumulated sludge of 160 T at both CSTPs to TSDF, Gummidipoondi in their action plan. The results of sludge analysis are illustrated in Table 6 of ***Annexure XII****.*

h) Common Effluent Treatment Plant samples for heavy metals

The trade effluent samples were collected in Common Effluent Treatment Plant on 11.02.2020 and the characteristics of effluent samples are illustrated in Table 7 of ***Annexure XIII****. From the results, it was found that the heavy metals are within the standards prescribed by the Inland surface water Parameters for discharge standards of trade effluent in both RO permeate and RO reject.*

9. ACTION PLAN OF THE STAKE HOLDERS

a) Avadi City Municipal Corporation:

The Commissioner, Avadi City Municipal Corporation has prepared the short term and long term action plans as below to control the discharge of 0.59 MLD of sewage generated from Jothi Nagar, Cholambedu Main road, Ganapathi Nagar, Annai Sathya Nagar, Periyar Nagar and New Anna Nagar into Ambattur Lake (copy of the action plan submitted by the stakeholder is enclosed as ***Annexure XIV****).*

Short Term Action Plan			
Sl.	***Description of***	***Action Plan for the***	***Target date***

No	Issue	issue	
1	Ward No.14 Jothi Nagar residents drainage water and grey water discharging to Ambattur Lake	In this area underground drainage system has been laid and the trail running of Under Ground Sewerage Scheme project is under progress by CMWSSB after completion of trail run the entire 300 houses (0.06 MLD grey water generated per day) in Jothi Nagar residents House service connection will be given by Corporation. The sewage water discharge to Lake will be controlled fully after completion of the above said work.	Due to COVID-19, the Avadi corporation cannot be proceed any work in that particular area since all the area came under cluster containment zone (containment wards 3,6,7,8,9,11,13,15,16,17,18,19, 32, 36 and 48). More over the UGSS internal plumbing for houses in the above wards, detailed project report has been prepared and submitted for administrative approval for 4993 connections with the estimate cost of Rs.560 Lakhs. In this estimate covered all the houses of above said 14th ward area of 1295 connections. After getting the administrative sanction corporation will placed the tender for house service connections. The work will be started after COVID-19 pandemic as per Govt. Guidelines.
2	Ward No 10,11,12 Cholambedu Main road residents drainage water and grey water discharging to Ambattur Lake	In Cholambedu area the Under Ground Sewerage system has been implemented the trail run, and the system is in progress by CMWSSB. After completion of trail run, the Corporation will be given the House service connection to the entire 1510 houses (0.3MLD grey water generated per day) in Cholambedu area. The House service connection work will be started within a month. The sewage water discharge to Lake will be controlled fully after completion of the above said work.	Due to COVID-19, the Avadi corporation cannot be proceed any work in that particular area since all the area came under cluster containment zone (containment wards 3,6,7,8,9,11,13,15,16,17,18,19, 32, 36 and 48). More over the UGSS internal plumbing for houses in the above wards, detailed project report has been prepared and submitted for administrative approval for 4993 connections with the estimate cost of Rs.560 Lakhs. In this estimate covered all the houses of ward 10 – 790 connections, ward 11- 844 connections & ward 12- 642 connections. All the above three wards total connection is 2276 connections. After getting the administrative sanction corporation will placed the tender for house service connections. The work will be started after COVID-19

			pandemic as per Govt. Guidelines.

Long Term Action Plan			
Sl. No.	**Description of Issue**	**Action Plan for the issue**	**Target date**
1	Ward No. 9 Ganapathy Nagar area residents drainage water and grey water discharging to Ambattur Lake	Ganapathy Nagar area is not covered in this current Underground sewerage system project, so the detailed survey has been taken up for preparation of detailed project report for providing Underground sewerage system in that left out area by TamilNadu Water Investment Company Ltd.(Total 165 households with 0.03 MLD grey water generated per day).	The detailed project report for UGSS left out area survey work has been by Tamilnadu Water Investment Company Ltd. The consultant was fixed by Commissioner of Municipal Administration, Chennai-28. As of now the survey work and preliminary detailed project report for all wards completed and the land identification of pumping station and sewage treatment plan is in progress. After completion of land identification for all the detailed project report with cost will be prepared by Tamilnadu Water Investment Company for further approval. The entire project period will be planned on or before 2025
2	Annai Sathya Nagar, Periyar Nagar and New Anna Nagar area residents drainage water and grey water discharging to Ambattur Lake	Annai Sathya Nagar, Periyar Nagar and New Anna Nagar area are not covered in this current Underground sewerage system project, so the detailed survey has been taken up for preparation of detailed project report for providing Underground sewerage system in that left out area by TamilNadu Water Investment Company Ltd.	The detailed project report for UGSS left out area survey work has been by Tamilnadu Water Investment Company Ltd. The consultant was fixed by Commissioner of Municipal Administration, Chennai-28. As of now the survey work and preliminary detailed project report for all wards completed and the land identification of pumping station and sewage treatment plan is in progress. After completion of land identification for all the detailed project report with cost will be prepared by Tamilnadu Water Investment Company for further approval. The entire project period will be

			planned on or before 2025
		In order to control the discharge of grey water from the above said area 972 households (0.20 MLD) grey water from the entire households. The corporation has planned to construct five numbers of collection tanks to collect the all grey water in that respect area and dispose the same through Sullage water removal vehicle.	*The Corporation has planned to construct five numbers of collection tanks to collect the gray water in that respective area and it will be removed through sullage water tanker vehicle and disposal will be in our UGSS pumping station. Due to COVID-19 activities works only carried out in our corporation. Simultaneously we floated tender on 29.05.2020 for construction of five numbers of collection tanks and also work awarded to the contractor M/s.KKR Builders.* *The above mentioned ward no 15 has been declared as cluster containment. Due to that COVID-19 activities only carry out in that ward. So the collection tank work will be started after completion of COVID-19 activities. In this collection tanks, all the grey water will be collected through corporation vehicle and to control mixing of rain water and grey water provided shutter to bifurcate both.*

b) Greater Chennai Corporation (Zone-7)

*The Commissioner, Greater Chennai Corporation (Zone-7), Ambattur has prepared the action plans as below for collection and disposal of municipal solid waste generated from Greater Chennai Corporation (Zone-7) which covers the residential and industrial solid wastes generated from the residents & industries in and around Ambattur Lake, Ambattur Lake surplus canal, Korattur Lake, Ambattur Industrial Estate, TASS Industrial Estate, Patavattaman Industrial Estate and Tiny Sheds (copy of the action plan submitted by the stakeholder is enclosed as **Annexure XV**).*

Sl. No	***Description of issues***	***Action Plan for the issues***	***Target date***
1	*Action Plan with time schedule to implement on municipal solid waste received from the Ambattur SIDCO industrial estate and collect*	➢ *SIDCO industrial estate has identified place for collection of garbage on temporary basis.* ➢ *GCC and SIDCO officials have jointly inspected the site. CAAIIUC has agreed to collect and store the*	*Completed*

	the municipal solid waste in Ambattur industrial estate from where it is stored by CAAIIUC and dispose the same in proper way	*garbage from 12.02.20.* ➢ *From 12.02.20 on GCC has commenced disposal of garbage from this designated location.*	
2	*Removal of municipal solid waste in residential areas located in and around Ambattur Lake surplus canal and to avoid dumping of municipal solid waste into the Ambattur Surplus Canal*	➢ *Greater Chennai Corporation has identified household in residential area in and around the Ambattur Surplus Canal. Details as follows : Annai Sathya Nagar - 362 Households Sivananda Nagar- 305 Households MKB Nagar - 320 Households* ➢ *Door to Door Collection is being carried in these areas by deploying 3 tricycles at 3 trips per day.* ➢ *Door to Door Collection is intensified by giving awareness to the individual houses and being continuously monitored by maintaining registers.* ➢ *IEC activities were conducted by way of rallies and issuing pamphlets to all the houses.* ➢ *Removal of garbage in the surplus canal is under progress by deploying Robotic earth mover and 70% of work is completed.* ➢ *As per Solid Waste Management By laws GCC has formulated penalty for throwing garbage in public and private place/littering from vehicles, littering in water bodies etc. which will be implemented after Gazette publications.*	*Completed*
3	*Also ensure that the proper collection, segregation and disposal of municipal solid waste in the private industrial estates such as TASS industrial estate, Patavatamman estate and Tiny Shed.*	➢ *TASS industrial Estate covers an area of around 20 acre with 285 industries.* ➢ *Removal of Municipal Solid waste inside the TASS industrial is being carried out through TASS industrial Estate Welfare Association by engaging maintenance contractor.* ➢ *Garbage Generation in TASS Industrial Estate is around*	*Completed*

		4.5 MT per day and this is being dumped in Greater Chennai Corporation Transfer Station Athipet. ➢ Regarding removal of Municipal solids waste from Padavatamman Estate and at Tiny sheds, GCC has identified around 118 industries in this area. ➢ Door to Door collection and disposal of garbage commenced in this area from 12.02.2020.	
4	The Secretary, Micro Small & medium Enterprises Department expressed that damage has been caused to the sewerage pipeline while works carried out by the Chennai Corporation and lead that to sewerage discharge into Ambattur surplus canal. The Commissioner, Greater Chennai Corporation expressed that the rectification work will be undertaken and will be completed within 15 days in coordination with SIDCO.	➢ SIDCO has furnished the sketch showing the damaged sewer lines in North Phase on 13.01.2020. GCC has inspected & prepared an estimate for Rs.26 Lakhs, tender settled and work commenced on 30.01.2020 ➢ For South Phase SIDCO has furnished the damaged sewer line sketch on 23.01.2020. GCC has conducted joint inspection along with CAAIIUC on 28/01/20 and commenced the work.	All the damaged sewer lines were rectified In north phase. In south phase only rectification of sewer line of 40 meter is balance. It will be completed before 15.10.2020

c) Chennai Metropolitan Water Supply and Sewage Board

*The Managing Director, Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) has arrived detailed action plan on short term and long term basis to plug the flow of domestic sewage into Ambattur surplus canal & to the Korattur Lake as below to provide underground sewer system (UGSS) for collecting 45 MLD of sewage generated in Zone 7 from Depot 79 to 93 of Greater Chennai Corporation including the industries located in TASS Industrial Estate and the industries located in Patavatamman Industrial Estate & Tiny Sheds (copy of the action plan submitted by the stakeholder is enclosed as **Annexure XVI**).*

Short Term Action Plan (Within six months) to plug the Domestic Sewage Outfalls into the Korattur Lake by CMWSSB.

Sl. No	Issues	Action Plan	Target Date
1	***Ramapuram/ Ward 85*** *(25 nos of streets) Underground sewer system available but house sewer connections are not connected in the main sewer system. They are using septic tank for collection of domestic sewage and over flow from septic tank are being let out into the SWD.*	• *Total no. of houses 700 Nos.* • *House sewer connections already given 401 Nos* • *The balance 299 Nos of house sewer connections are being effected under illam thorum innaippu scheme* • *Estimated Amount: Rs. 1.47 Cr* • *Fund G.O(Ms) No.107, MA&WS(MW1) Dept, dated 20.08.2019.*	*Due to COVID-19 national lockdown, this work could not get completed on or before 30.06.2020 as mentioned earlier. It will be completed on or before 31.12.2020*
2	***Teachers Colony/ Ward 85*** *i) Underground sewer System available in 8 streets.*	• *Total no. of houses 340 Nos.* • *House sewer connections already given 209 Nos.* • *The balance 131 Nos of house sewer connections are being effected under illam thorum innaippu scheme* • *Estimated Amount: Rs.0.71 Cr* • *Fund G.O(Ms) No.107, MA&WS(MW1) Dept, dated 20.08.2019.*	*Due to COVID-19 national lockdown, this work could not get completed on or before 30.06.2020 as mentioned earlier. It will be completed on or before 31.12.2020*
	ii) Underground sewer system not available in 6 streets, the residents are using septic tank for collection of domestic sewage and over flow from septic tank are being let out into the SWD.	• *The work order issued. Work will be commenced shortly* • *Total sewer main of length 1100m has to be laid and 37 Manholes has to be constructed* • *There are 190 houses are existing and all the house service connections are to be effected under illam thorum innaippu* • *Estimate Amount Rs.8.39 Cr,* • *Fund : CMCDM*	*Due to COVID-19 national lockdown, this work could not get completed on or before 30.06.2020 as mentioned earlier. It will be completed on or before 31.12.2020.*

Long Term Action Plan (More than six months) to plug the Domestic Sewage Outfalls into the Korattur Lake

Sl. No	Issues	Action Plan	Target Date
1	***Ward 90 –Padikuppam, Golden Gerorge Colony Ward 92 – Paarisalai, Mogappair East (10-12 Blocks). Ward 93 – Mogappair East (1-6 Blocks)*** • *Underground Sewage System is completed recently.*	*Entire 12789 m length of sewer main and 522 Manholes was completed 1314 House Sewer connections to be given under azhaithal innaippu. Estimated Amount: 7.24 Crores. Fund : CMCDM Sewer mains provided in 90 streets*	*Trial commission is under progress and it will be completed on or before 30.06.2021*
2	***i) SIDCO Industrial Estate/Depot 84 /Ward 85 & Depot 86/Ward 86 (P) TINY SHED-70 Nos.*** *Provision of Underground sewer system is under progress. (Industries located in station road, 5th street and 4th cross street are discharging sewage into the storm water drain).*	*There are 683 Industries existing. 70 House Sewer connections to be given under azhaithal innaippu Entire 2700m length of sewer main and 92 No.s of manholes were completed. Sewer mains provided in 9 streets*	*Work is under progress and it will be completed on or before 30.06.2021*
	ii) Depot 84 & 86 Korattur & Mannurpettai *Underground sewer system is under progress. The residents are using septic tank for collection of domestic sewage and over flow from septic tank is being letout into the SWD.*	*1300 House Sewer connections to be given under azhaithal innaippu Entire Sewer main connection of length 10380m and 524 manholes was completed. Estimated Amount: Rs. 6.08 Cr Fund : CMCDM Sewer mains provided in 157 streets*	*Work is under progress and it will be completed on or before 31.12.2021 .*
3	***Pattravakkam (84), Mannurpettai (84) Kachanankuppam (84), Ambattur, SIDCO Estate : 65 streets*** *No Underground Sewerage System. Work is under progress*	*Entire Sewer main of length 10380 m and 524 Manholes work was completed 1301 House Sewer connections to be given under azhaithal innaippu. Estimated Amount: 9.98 Crores. Fund : CMCDM*	*Work completed. Trial commissioning is under progress and it will be completed on or before 30.06.2021*
4	***Ward 86 – Athipattu, Mannurpettai (P), Ambattur Estate (P), ICF***	*29796 m length of sewer main was completed out of 30823m Balance 1027*	*Work is under progress and it will be completed on or*

	Colony. -211 streets *No Underground Sewerage System.*	*m has to be laid.* *1326 Manholes completed out of 1377 and balance 51 has to be constructed.* *2690 House Sewer connections to be given under azhaithal innaippu.* *Estimated Amount: 14.96 Crores.* *Fund : CMCDM*	*before 31.12.2021*
5	***Karukku(D/82-40 streets), Gnanamoorthy (D/82-25 streets), DTP Colony(D/82-5 streets), Poompuhar Nagar(D/81-5 streets), Mangalapuram (D/85-8 streets)*** *Underground sewer system available but not connected in the main sewer system. The residents are using septic tank for collection of domestic sewage and over flow from septic tank is being letout into the SWD.*	*245 Nos. Of House sewer connections was given.* *The balance 3705 Nos of house sewer connections are being effected under azhaithal innaippu out of 3950 Nos* *Estimated Cost: Rs.82.95 Cr* *Fund: G.O (Ms) No.107, MA&WS (MW1) Dept, dated 20.08.2019 for Rs. 224 Cr*	*It will be completed on or before 31.12.2020.*
6	***TASS Industrial Estate/Depot 85 (Corporation) -26 streets*** • *No Underground Sewer system available. & 143 Industries are existing*	*Entire 2974 m length of Total sewer main has to be laid and 100 Manholes has to be constructed & Work will commence on 22.07.2020* *143 House Sewer connections to be given under azhaithal innaippu scheme* *Estimated Amount: Rs. 8.39 Cr* *Fund : CMCDM*	*Work will be completed on or before December 2021.*
7	***Depot 79 to 83,87to 88 /Ward79 to 83,87to 88 Ambattur(OT) -145 streets,Kallikuppam-90 streets*** • *Underground sewer system available but not connected in the main sewer system. The residents are using septic tank for collection of domestic sewage and over flow from septic tank is being letout into the SWD.*	*Total no. of houses 29237 Nos.* *House sewer connections effected under azhaithal innaippu scheme 2125 Nos.* *The balance 27112 Nos of house sewer connections are being effected under Azhaithal inaippu scheme* *Estimated Amount: Rs. 61.39 Cr* *Fund: G.O (Ms) No.107, MA&WS (MW1) Dept,*	*It will be completed on or before 31.12.2021*

		dated 20.08.2019 for Rs. 224 cr.	
8	**Depot 81/ Ward 81** **KK Road, Ambattur OT, Indira Nagar, Kalayanapuram, Thiruvallur Nagar** **Ward 82** **Kallikuppam Menambedu, Karruku, DTP Colony, Gnanamoorthy Nagar, Madanamkuppam(Part)** **Ward : 91- Ebinezer avenue** • Sewer mains are to be provided in 64 streets.	Entire Sewer main of length 1110m has to be laid 16 manholes completed out of 356 and balance 340 manholes has to be constructed and work is under progress azhaithal innaippu scheme Estimate Amount Rs.7.45 Cr Fund :CMCDM 1115 House Sewer connections to be given under Azhaithal innaippu scheme.	Work will be completed on or before 30.06.2021
9	**Depot 79 / Ward 79** **Oragadam, Gandhi Nagar, Ram Nagar, Ezhil Nagar** **Depot 80 / Ward 80** **Puthur, Vijayalakshmi Puram, Banu Nagar** • Sewer mains are to be provided in 100 streets.	Entire Sewer main of length 10648 m has to be laid and 348 manholes has to be constructed Work is yet to be commenced azhaithal innaippu scheme Estimate Amount Rs. 8.05 Cr Fund :CMCDM 1246 House Sewer connections to be given under Azhaithal innaippu scheme	Work will be completed on or before 30.06.2021
10	**Depot 83 /Ward 83** **Katchanankuppam, Korattur, TVS Nagar, Annai Nagar, Madanamkuppam (Part)** **Depot85 /Ward85** **Kamaraja Puram, TASS Avenue, Vanchi nagar** • Sewer mains are to be provided in 56 streets.	Entire Sewer main of length 4205m has to be laid and 147 manholes has to be constructed. Work is yet to be commenced Estimate Amount Rs. 8.39 Cr Fund :CMCDM 686 House Sewer connections to be given under azhaithal innaippu.	Work will be completed on or before 30.06.2021
11	**Annai Sathiya Nagar (D/86)** No Underground Sewer system available at present Sewer mains are to be provided in 12 streets.	Estimate has been prepared and under scrutiny for 400 No.s of HSC to be given under Illam thorum innaipu and Total Sewer main of length of 1725 m and 60 No.s of Manholes.	Work will be completed on or before December 2022

		Fund : G.O(Ms) No.107, MA&WS(MW1) Dept, dated 20.08.2019 for Rs. 2371 Cr.	
12	***Sivanandha Colony (D/85)*** *No Underground Sewer system available at present Sewer mains are to be provided in 12 streets.*	*Estimate has been prepared and under scrutiny for 450 No.s of HSC to be given under Illam thorum innaipu and Total Sewer main of length 887 m and 37 No.s of Manholes Fund G.O(Ms) No.107, MA&WS(MW1) Dept, dated 20.08.2019 for Rs. 2371 Cr.*	*Work will be completed on or before Dec'2022*
13	***MKB Colony (Depot 85/Ward 85)*** *No Underground Sewer system available at present. Sewer mains are to be provided in 21 streets.*	*Estimate has been prepared and is under scrutiny for 630 Nos of HSC to be given under Illam thorum innaipu and Total Sewer main of length 2852 m and 120 Nos of Manholes Fund G.O(Ms) No.107, MA&WS(MW1) Dept, dated 20.08.2019 for Rs. 2371 Cr.*	*Work will be completed on or before Dec'2022*
14	***Patavatamman Estate and Tiny shed / Depot 84/Ward 84*** • *No Underground Sewer system available.* • *Sewer mains are to be provided in 15 streets.*	*Estimate has been prepared and under scrutiny for 237 No.s of HSC to be given under Illam thorum innaipu and Industries and Total Sewer main of length of 1238 m and45 No.s of Manholes Fund: G.O (Ms) No.107, MA&WS (MW1) Dept, dated 20.08.2019 for Rs. 2371 Cr.*	*Work will be completed on or before Dec' 2022*

The details of collection, transportation and disposal of sewage generated from the Zone 7 (Depot 79 to 93) area through 23 numbers of pumping station with total quantity of 45 MLD sewage to two STPs located at Koyembedu and Kodungaiyur.

d) Public Works Department

The Principal Secretary to Government, Public Works Department has furnished the long term and short term plan to remove the encroachment in the foreshore of Korattur Lake and to control the dumping of municipal solid waste near and into the Ambattur Lake, Ambattur Surplus canal and Korattur Lake (copy of the action plan is enclosed as ***Annexure XVII****)*

Short Term Action Plans

Sl. No	Description of issue	Action plan for issue	Target date
1.	There are no regulator arrangements in both the inlets and the weir-2 near North Avenue of Korattur Lake. Inundation occurred in the nearby areas of inlet since, the inlet water cannot be regulated during the rainy season.	Construction of Regulator arrangements in DTP colony inlet, Ondi veeran Koil inlet, Weir-2 near North Avenue of Korattur Lake.	Before March 2021
2.	The Ambattur surplus channel runs through the highly urbanized areas of Ambattur and Ambattur Estate before reaching Korattur Lake. The nearby residents are used to throw the solid wastes in the Surplus channel.	Providing Fencing arrangements for 2930 Meter length in the Existing RCC retaining walls in Ambattur Surplus channel to curtail the illegal dumping of solid waste.	Before March 2021
3.	The Ambattur surplus channel is an earth channel. Silt up takes place throughout the channel. Due to in fall of sewage/sullage water in the channel, hyacinths are fast growing and obstruct the free flow of water.	Removal of hyacinths, weeds, floating materials and desilting of Ambattur Surplus Channel from Ambattur Lake to Korattur Lake every year.	Before the month of September, every year.
4.	The Korattur Lake is having 8500 m peripheral length out of which 6800 m length is having bund. The remaining portion of 1700 m is foreshore area. In the foreshore area encroachments are found in some places and solid waste and sewage waters are directly let into the Lake.	Demarcation of Korattur Lake and Ambattur Surplus Channel with the help of Revenue Department and evict the encroachments after following the due legal procedures.	Before September 2021
5.	The Korattur Lake is having the extent of nearly 590 Acres. The tank attains its full capacity once in 4 to 5 years. Nearly seventy five percent land area covered by Hyacinths, Prosophis, Juliflora, weeds and floating materials etc., Except the natural species the flora which are the threats to environment should be removed.	Removal of Hyacinths, weeds, floating materials and Prosopis Juliflora in the Korattur Lake once in two years.	The work is in progress. The work will be carried out before the month of September, once in 2 year. The Hyacinths, weeds, floating materials and Prosopis

			Juliflora had been cleared in the year 2019

Long Term Action Plans

Sl.No	Description of issue	Action plan for issue	Target date
1.	*The Korattur Lake is having 8500 m peripheral length out of which 6800 m length is having bund. The remaining portion of 1700 m is foreshore area. In the foreshore area encroachments are found in some places and solid waste and sewage waters are directly let into the Lake. Heavy metals are found in the soil samples of Korattur Lake due to in fall of unauthorized Industrial effluents in to the Ambattur surplus channel.*	*Providing 6000m length of protection wall with fencing arrangements and foreshore bund to a length of 500m along the foreshore boundary of Korattur Lake to curtail the encroachments and illegal dumping of solid waste. Bund strengthening using revetments to a length of 500 m. Removal of top soils in the areas of sludge formation, found in eastern side of Korattur tank and desilting the Korattur Lake and forming 5 Nos. of inland island inside the Lake with bottom dimension of 220x220 m and top dimension of 96x96 m by using the above desilted soils to a height of 10 m.*	*Before April 2022*
2.	*In the entire stretch of Ambattur surplus channel lot of unauthorized in fall points of sewage/sullage water are found made by the local residents.*	*Plugging of unauthorized sullage water disposal inlets in to the Ambattur surplus channel.*	*Before April 2022. After the completion of UGSS by CMWSSB.*
3.	*The Ambattur surplus channel water passes through the balance culverts provided by the Railway department and in falls in to the Korattur Lake near DTP colony. This channel is an earthen channel. The nearby residents are used to*	*Providing RCC wall with Fencing arrangements on both side of the DTP Colony Channel which leads to Korattur Lake.*	*Before April 2022*

	through the solid wastes in the Surplus channel. Further in the full supply level of Ambattur surplus channel the area of DTP colony inundated every year.		

e) Chennai Auto Ancillary Industrial Infrastructure Upgradation Company

*The Chennai Auto Ancillary Industrial Infrastructure Upgradation Company (CAAIIUC) has submitted the short term and long term action plan for the following (copy of the action plan is enclosed as **Annexure XVIII**)*

- *To improve the discharge of sewage and disposal of hazardous and other wastes generated from the Ambattur Industrial Estate*
- *To dispose the Municipal solid waste, mixed wastes (Municipal Waste and Hazardous Waste) dumped in the Ambattur Industrial Estate*
- *To improve the efficiency of the CSTP's, to provide facility of underground sewer to the unsewered units, to dispose the accumulated hazardous waste*

Short Term Action Plan:

Sl. No	***Description of each issues***	***Action Plan for the issues***	***Target date***
1	*Collection of garbage in industrial estate*	*Two locations were identified by SIDCO in 2MLD plant and 3MLD plant with an area of 4500 sq.ft in each location*	*From 10.02.2020 Greater Chennai Corporation is collecting the garbage.*
2	*Municipal Solid Waste Dumped in the Road*		
I)	*Dumping Domestic Solid waste in SP Sector-1 9th Street Ambattur Industrial estate, Chennai-600 058.*	*Waste will be removed and the area will be fenced accordingly and CCTV will be installed to avoid dumping*	*Waste Removed on 09.03.2020 and CCTV will be commissioned on or before 20.10.2020*
ii)	*Dumping of Municipal solid waste in SP Sector- 1 13th Street Ambattur Industrial estate, Chennai-600 058.*	*Waste will be removed and the nearby units is agreed to fence the area and maintain it to avoid further dumping*	*Removed on 21.03.2020 and the area will be fenced on or before 30.09.2020*
iii)	*Dumping of Municipal Solid waste in SP Sector- 1, 1st Main road, 5th Lane,*	*Waste will be removed and providing gate with CCTV to avoid dumping of waste*	*Removed on 18.02.2020 and CCTV will be commissioned on or before*

	Ambattur Industrial estate, Chennai-600 058.		*20.10.2020*
iv)	*Dumping of Municipal Solid waste in post office road SP Sector – 1 near 2nd Street Junction, Ambattur Industrial estate, Chennai-600 058.*	*Area will be Cleared and nearby Units agreed to Fence and maintain the place*	*Removed on 11.05.2020 and the area will be fenced on or before 30.09.2020*
v)	*Dumping of Municipal waste in ATC Road, Ambattur Industrial estate, Chennai-600 058.*	*Area will be Cleared Immediately, because of entry gate not able to fence the area and Nearby units has agreed to provide CCTV to avoid dumping.*	*Removed on 13.06.2020 and CCTV will be commissioned on or before 20.10.2020*
vi)	*Dumping of Municipal Solid waste in Tiny Sector SP Sector-1, Ambattur Industrial estate, Chennai-600 058.*	*Area will be Cleared and Fencing will be done by nearby unit holders.*	*Removed on 11.05.2020 and the area will be fenced on or before 30.09.2020*
vii)	*Dumping of Municipal Solid waste in 9th Street NP Sector-1, Ambattur Industrial estate, Chennai- 600 098.*	*Area will be cleared and fencing will be done by nearby unit holders and the Quotation has been given for fencing and 4 nearby units have agreed to fence and maintain.*	*Removed on 27.03.2020 and the area will be fenced on or before 30.09.2020*
2a	*Mixed Solid Waste*		
I)	*Mixed Solid waste dumped in SP Sector-1 Tiny sector near 15th street, Ambattur Industrial estate, Chennai-600 058.*	*Mixed Solid waste will be removed immediately by Authorised Service provider.*	*Letter given to the individual unit holder to remove the dumped waste through authorized hazardous waste disposal service provider in their private land. It will be completed on or before 30.09.2020*
ii)	*Mixed Solid waste dumped in NP Sector-1 9th Street near Padavattamman estate, Ambattur Industrial estate, Chennai-600 098.*	*Mixed Solid waste will be removed immediately by Authorised Service provider.*	*Removed on 27.03.2020 and CCTV will be commissioned on or before 20.10.2020*

3	Disposal of Hazardous Waste		
i)	Hazardous Waste Generation in Ambattur Industrial estate.	CAAIIUC has engaged M/s. Quality Business System for Collection of Hazardous Waste generated in Ambattur Industrial Estate and already allotted and handed over 5000 sq.ft shed with impervious flooring Collection facility for both South & North phase for SIDCO holders, Currently are collecting from 404 units to a tune of 534 tons per year	Within a period of 6 months hazardous waste generating units will be covered and report will be furnished
ii)	Disposal of accumulated sludge at 2MLD and 3MLD CSTP	Accumulated sludge will be disposed to TSDF, Gummidipoondi through Tamil Nadu Waste Management Ltd.	The accumulated sludge from both 2 MLD & 3 MLD CSTP will be removed on or before 27.10.2020
4	Sewer Connection to be Effected to Unsewered Units		
	Unsewered Units	Remaining 226 units has to be connected with common sewer system, in this 40% of the units will be provided in March 2020 and the balance will be completed in September 2020.	New sewer connection for 54 units has been completed and the sewer connection for remaining 175 units will be completed within two months after lockdown
5	Coolant Disposal		
	The Coolant water is used by machining units using CNC/VMC machines. It is a mix of 95 to 97% of de-mineralized water and 5 to 3 % of water soluble coolant addition to keep the temperature down, so that the heat generated during the machining operation does not affect the material machined or the insert used. The units are using	CAAIIUC has identified two equipment's as under 1. Coolant Filtration Machine 2. Tramp oil Separator and taken trials on the above machines and found the same effective and placed orders for 2 sets, one for north and one for south phase. After receiving the above machines it will be moved in small ACE trucks and sent to undertake both the operations at the member units and the cleaned coolant will be put back in the machine for use. One of the CAAIIUC member units is using those machines since last 6 months and they had no need to dispose the	Coolant Filtration machine was purchased and installation done and made arrangement for vehicle to visit member units for testing. The trial run in 3 units has been done on 27.05.2020 and the units are satisfied with the result oriented. New vehicle was arranged to visit individual

	high value synthetic additive made by companies like Quaker USA, Blazer Switzerland etc which do not deteriorate during use. Therefore the only requirement is filtering of the coolant and periodic removal of tramp oil floating on the coolant.	*coolant, thus saving money and the environment. Based on the performance bigger units will be encouraged to buy and install these machines is house while small units with 3 to 4 machines will avail the service from CAAIIUC.*	*industry on daily basis which requires coolant filtration service in both north and south phase of Industrial estate.*
6	*3MLD & 2MLD CSTP*		
	Treated Sewage quality such as BOD, COD & Faecal Coliform exceeds the standards prescribed.	*CAAIIUC will increase the retention time of both 2MLD & 3MLD CSTP to effectively achieve the discharge standards.*	*Monthly test samples taken from 3MLD & 2MLD CSTP shows Faecal Coliform is under limits. However regular monthly test sampling will be taken from 3MLD & 2MLD CSTP to check if Faecal Coliform is under limits.*

Long Term Action Plan:

S. No	***Description of each issues***	***Action Plan for the issues***	***Target date***
1	*Sewer Main Line to be Provided in Unsewer Area*		
	Unsewered Area, i)3rd main Road Near athipet petrol bunk (94c/1, 94c/2, 94c/3 & 94c/4 have to be connected. Chennai-58. ii)1st Street SP sector-3, Ambattur Industrial estate, Chennai-58. iii) 3rd Main Roa NP Service Road, NP Amabttur industrial estate, Chennai-98.	*Survey has to be done for giving sewer connection to the unsewered area and after survey the work will be commenced. ii) Land survey has to be done with revenue people opposite to Telephone Exchange to carry the sewage work.*	*2 Years*

2	3MLD & 2MLD CSTPs		
	Reusing of Treated water from 3MLD and 2MLD CSTPs	It is proposed to Increase green cover in Industrial Estate to use treated water to plants and also to units for flushing.	The work for increasing green cover in the industrial estate is started and the first project was successfully completed in Ponniamma Kovil Pond at Pattravakkam. Also mail sent to all members units to increase the green cover in the front portion available in their individual companies. CAIIUC has engaged an Engineer to indentify area to increase the green cover inside our estate. Accordingly few places have been marked and the same will be taken up for increasing green cover.

f) Common Effluent Treatment Plant (CETP)

*Presently the CETP is collecting the trade effluent from the 178 electroplating member units located in North and south phase of SIDCO Industrial Estate, Ambattur through dedicated tanker Lorries and M/s.JBR Technologies Pvt. Ltd (CETP) has proposed the short term and long term action plan for improvement of existing CETP with additional components (copy of the action plan submitted by the stakeholder is enclosed as **Annexure XIX**)*

Short Term Action Plans

Description of each Issues	Action plan for the Issues	Target date
Improvements of existing CETP with addition or increase the capacity of components/equipments	1. Installation of Collection tank up to 120 KL for continuous preparation of Batches.	Completed
	2. Installation of Reactors & Tube settlers up to 120 KL	Completed
	3. Regeneration system of Cation and Anaion exchangers	Completed
	4. Arrangement of Blowing air system for Degassifier	Completed
	5. Modification of Reverse Osmosis system to reduce Reject water (Single stage to triple stage)	Completed
	6. Preparation of DM water by installation of Mixed Ion Exchange	Completed
	7. Installation of Filter press or Thickener for solid sludge formation	30.10.2020

	8. *Insulation of Multi Effective Evaporator to reduce Heat loss/ Risk probability*	*30.10.2020*
	9. *Fabrication of Drain line from MEE to Sludge blankets*	*30.10.2020*

Long Term Action Plans

Description of each Issues	***Action plan for the Issues***	***Target date***
Improvements for reduce Cost & best treatment practices	*Installation of ATFD for MEE Concentrate converts to solid form.*	*December 2020*

g) Disposal of Mixed Solid Waste from TASS Industrial Estate

*The TASS Industrial Estate Welfare Association has submitted the following action plan to disposal of hazardous and other wastes generated from the TASS Industrial Estate (copy of the action plan submitted by the stakeholder is enclosed as **Annexure XX**)*

Short term action plan:

Sl. No	***Description of each issues***	***Action Plan for the issues***	***Target date***
1	*Dumping of Hazardous waste (mixed waste) near Mahatma Gandhi 3rd Street, TASS Industrial Estate, Chennai – 98*	*1. The mixed garbage is to be cleared with the help of Municipal Authority and dumped in to garbage yard* *2. The plastic waste is to be sent for recycling by the person who has kept outside the compound*	*Completed*
		3. The oil mixed with water (hazardous waste) is to be removed with the help of authorities and recyclers.	*Completed*
2	*Dumping of hazardous waste (mixed waste) in the water stagnation area, adjacent to Mahatma Gandhi Road, TASS industrial estate.*	*The mixed waste is to be cleared in the water stagnation area*	*Completed*

h) Tamil Nadu Pollution Control Board

The Hon'ble NGT in its order dated 12.12.2019 has directed the Tamilnadu Pollution control Board to inspect the industries, including the 'white ' category industries in that area and find out whether any violation is committed by them. If there is any violation, they will have to take appropriate action to abate the same and if any upgradation is required on account of pollution load in that area, that also will have to be considered by the state Pollution Control Board and appropriate change of category will have be restored and it will have to be brought under the consent mechanism, if it required. Also directed the Tamilnadu Pollution control Board to consider the BOD, COD and faecal coliform present in the water in that area in order to ascertain the quality of the water and find out whether they are complying the norms whether the existing system is adequate to meet the situation. If not, proper alternate mechanism to meet the condition or standardisation of the STP to meet the situation has to be done. They are also directed to consider the criteria to ascertain the presence of dangerous metals, if any, which is likely to affect the human health. The DEE, TNPCB, Ambattur has submitted the short term and long term action plan to comply above said directions (copy of the action plan is enclosed as ***Annexure XXI****).*

Short Term Action Plan:

Sl. No.	***Description of each issues***	***Action plan for the issues***	***Target date***
1	*TNPCB to inspect all the industries, to take appropriate action on violating units.*	*As per the NGT order dated 12.12.2019,* • *A special team was formed consisting of 10 Engineers to carry out inspection from 2.1.2020* • *Totally 2976 units have been inspected.* • *Out of these 2976 industries,* • *784 industries have applied and obtained consent,* • *255 no of industries have closed and vacated their premises* • *197 sheds are godowns* • *784 no of industries categorised under white category as per BP.No.06 dated 02.08.2016.* • *Further there are about 956 units brought under green category which was earlier categorised under white category and instructed to obtain consent of the Board.*	*Inspection of all the industries was completed on 15.3.2020*

2	*The TNPCB was directed to consider the BOD, COD and faecal coliform present in the water in that area in order to ascertain the quality of the water and to comply with the norms and to check for adequacy of existing system . If not, alternate mechanism or standardisation of the STP to meet the situation*	***1.Ambattur surplus canal*** • *Samples have been collected in the Ambattur surplus canal and the ROA reveals that the value ranges of BOD, COD, Faecal Coliform indicates that the channel is contaminated with untreated sewage from the nearby unsewered areas.* • *CMWSSB has to take action to provide sewer system to unsewered areas and to take action to provide connection with the sewer system so as to treat the same in the existing STP provided at Kodungaiyur and Koyambedu for further treatment and disposal.* *2.* ***Common STP provided by CAAIIUC*** • *Samples were collected at CSTP (3 MLD & 2 MLD) and the parameters BOD, COD and Faecal Coliform values shows marginal increase in the standards prescribed by the Board.*	*Being monitored regularly and samples collected on a regular basis and analysed for the said parameters.*

Long Term Action Plan

Sl. No.	***Description of each issues***	***Action plan for the issues***	***Target date***
1	*TNPCB to inspect all the industries and to consider the appropriate change of category and to be brought under the consent mechanism, if it required"*	• *There are about 956 units inventorised under green category which was earlier categorised under white category and also under green and orange small category.* • *These industries are involved in machining operations using CNC machines which use coolant diluted with water (95% water and 5%*	*Target date to complete the consent mechanism to those newly inventoried industries is 30.06.2021.* *As there is lock down prevailing in the country,*

		coolant) for the purpose of cooling during machining operation. • *These machining industries do not generate waste on a daily basis. Coolant water is being re-circulated and once it has become contaminated, the waste coolant is let out.* • *The frequency of letting of coolant varies between once in 3 month /6 months/ one year/ 2 years and the quantity varies between 10 litres / annum to 1000 Lit/ annum.* • *This coolant is found to be disposed un-authorised leading to pollution of land and water.* • *In view of this, these industries have been brought under green category so as to have periodic monitoring of the units activity. So the units have been instructed to apply and obtain consent of the Board.* • *However as there is no facility established by the CAAIIUC or with the individual units to dispose the trade effluent (coolant water), the units are currently storing the trade effluent in barrels as and when generated.* • *So far 91 no of units have submitted application through OCMMS by these sectors of industries and the application are pending for the decision of disposal of coolant water.* • *The CAAIIUC has stated that machineries for treating the coolant are being purchased and is in the process of installation and yet to start with the trail run.*	*most of the industries are not under operation, thereby causing delay in completing the consent mechanism.*

		• *Once the waste coolant disposal is established all the industries will be brought under preview of TNPCB*	

10. ENVIRONMENTAL COMPENSATION

The Hon'ble NGT order dated: 12.12.2019 has directed the committee shall also go into the question regarding the damage caused to the environment on account of the unbridled discharge of sewage and trade effluents and the remedial measures to mitigate the damage caused to the environment and restore it to its original position and if necessary they can also identify the persons who are responsible for the same and assess environment compensation and recover the same from those persons who are responsible for the same in proportion to the contribution made by them applying "polluters pay" principle and submit a report in this regard as well.

Environmental Compensation for Violated industries

The Hon'ble NGT in its order dated 13.12.2016 directed the District Administration, Revenue Dept, PWD & TNPCB to plug the passage created for the purpose of sending the trade effluent to Korattur Lake. Based on this order, the TNPCB has taken action against the violating industries from January 2017 for the following violations.

1. *Discharge of untreated/partially treated trade effluent into the storm water drain and it reaches the Ambattur Lake surplus cannel which leads soil and water pollution*
2. *Non compliance of the conditions stipulated in the CTO/RCO and violations of the consent order conditions issued by the Board.*
3. *Unit was under operation without consent to operate of the Board and violating the provisions of the Water and Air Acts*
4. *Disposal of hazardous waste such as coolant oil, grinding mud and oil chocked cotton waste in Industrial estate*

The TNPCB has levied the interim environmental compensation to 153 units located in Ambattur SIDCO industrial estate (both north and south phase) for above said violations as furnished by the DEE, TNPCB, Ambattur. The environmental compensation has been calculated for the violated units under "polluters pay principal" by using the following formula

EC = PI x N x R x S x LF

Where,

EC - Environmental compensation in Rupees

PI – Pollution index of industrial sector.

The average pollution index of 80, 50 and 30 has been taken for calculating the environmental compensation for Red, Orange and Green categories of industries.

N – Number of days for which violation took place is the period between the days of violation observed/ due date of compliance of directions and the day of compliance verified by CPCB/ SPCB/PCC.

The number of days were calculated between the day of violation identified (date of inspection) and day of violation stopped (date of EB supply disconnection)

R – A factor in rupees for EC.

The minimum and maximum value of factor is 100 and 500. The minimum value of factor i.e.100 is considered in the environmental compensation calculation because all the defaulting units are micro and small scale units. The suggested value of factor R is considered as 250 for medium and large scale industries.

S – Factor for scale of operation.

S could be based on small/medium/large industry categorization, which may be 0.5 for micro or small, 1.0 for medium and 1.5 for large units.

LF – Location factor based on population of the city/town and location of the industrial unit. The Ambattur is added with Greater Chennai Corporation (GCC) as Zone -7 and while calculating EC, only the Zone-7 population as per guidelines (less than one million) was considered instead of entire GCC and hence it comes under Class-1 City/Town based on population. The value of LF is 1 for city/town having population less than one million.

Model Calculation for Red Category (Micro and Small units):

- *PI - The average Pollution Index industrial sector for Red Category - 80*
- *N - The number of days were calculated between the day of violation identified (date of inspection) and day of violation stopped (date of EB supply disconnection)*
- *R - The minimum value of factor i.e.100 was considered in the environmental compensation calculation because all the defaulting units are micro and small scale units.*
- *S - Factor for scale of operation small scale category – 0.5*
- *LF - The value of LF is 1 for city/town having population less than one million.*

EC = PI x N x R x S x LF
= 80 x 1 x 100 x 0.5 x 1
= Rs.4000 per day (Rupees Four Thousand per day)

Model Calculation for Orange Category (Micro and Small units)

- *PI - The average Pollution Index industrial sector for Orange Category – 50*
- *N - The number of days were calculated between the day of violation identified (date of inspection) and day of violation stopped (date of EB supply disconnection)*

- *R - The minimum value of factor i.e.100 was considered in the environmental compensation calculation because all the defaulting units are micro and small scale units.*
- *S - Factor for scale of operation small scale category – 0.5*
- *LF - The value of LF is 1 for city/town having population less than one million.*

EC = PI x N x R x S x LF
= 50 x 1 x 100 x 0.5 x 1
= Rs.2500 per day (Rupees Two Thousands Five Hundred per day)

Model Calculation for Green Category (Micro and Small units)

- *PI - The average Pollution Index industrial sector for Green Category - 30*
- *N - The number of days were calculated between the day of violation identified (date of inspection) and day of violation stopped (date of EB supply disconnection)*
- *R - The minimum value of factor i.e.100 was considered in the environmental compensation calculation because all the defaulting units are micro and small scale units.*
- *S - Factor for scale of operation small scale category – 0.5*
- *LF - The value of LF is 1 for city/town having population less than one million.*

EC = PI x N x R x S x LF
= 30 x 1 x 100 x 0.5 x 1
= Rs.1500 per day (Rupees Thousands Five Hundred per day)

Model Calculation for Orange Large Category

- *PI - The average Pollution Index industrial sector for Orange Large Category - 50*
- *N - The number of days were calculated between the day of violation identified (date of inspection) and day of violation stopped (date of EB supply disconnection)*
- *R - A Factor in rupees for EC which may be a minimum of 100 and maximum of 500;* ***it is suggested to consider R as 250****.*
- *S - Factor for scale of operation large small scale category – 1.5*
- *LF - The value of LF is 1 for city/town having population less than one million.*

EC = PI x N x R x S x LF
= 50 x 1 x 250 x 1.5 x 1
= Rs.18750 per day (Rupees Eighteen Thousand Seven Fifty per day)

The total amount of Rs.1,09,69,500/- has been levied as interim environmental compensation for the defaulting units for above said violations and the list of defaulting industries along with environmental compensation is illustrated in ***Annexure – XXII****.*

M/s.TI Cycles of India, Ambattur

The unit of M/s.TI Cycles of India was inspected on 08.11.2019 and 13.11.2019 by the team and recommended for direction for closure and disconnection of power supply under Section 33A of Water (P&CP) Act, 1974 as amended and under Section 31A of Air (P&CP) Act, 1981 as amended for the following violations.

1. *The unit has stored the untreated trade effluent (process effluent) in sewage treatment plant sludge drying bed and illegally dumped the HW such as ETP sludge/STP sludge in STP area and the sludge is washed away along with rain water and discharged into Ambattur surplus canal and then to reach Korattur Lake.*
2. *The unit has disposed the partially treated sewage & trade effluent/untreated sewage & trade effluent into the land located at backside of industry i.e. adjacent to Ambattur Lake and also the discharged effluent into land reaches the Ambattur Lake surplus cannel which pollutes soil and water.*
3. *The unit has not segregated the hazardous waste from trade effluent by not operating the ETP & RO plants and the sludge along with trade effluent is disposed on land with acidic in nature and the trees are dead.*
4. *The unit has caused the environmental damages such as contamination of soil, ground water, surface water and caused the damage of tree planted in the land.*

Hence, the TNPCB has levied the environmental compensation of Rs.10.35 lakhs for damage to the environment and penalty of Rs.29 Lakhs violation towards of provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for the unit of M/s.TI Cycles of India, Ambattur Village, Ambattur Taluk, Chennai District vide Proceeding No.T4/TNPCB/F.0787AMB/RL/W&A/2019 dated 6.12.2019 by considering the environmental compensation formula and penalty calculation provided by CPCB guideline and the number of day's violation was taken from 11.11.2019 to 30.11.2019. Further, the unit has taken corrective measures for the directions issued by the TNPCB and also the action plan furnished by the unit is enclosed in ***Annexure-XXIII****.*

11. SUMMARY AND CONCLUSION

- *As per the Hon'ble NGT direction dated 12.12.2019 and 27.02.2020, the TNPCB has communicated a letter to the line departments to nominate the members. Also the TNPCB has requested the Government for constitution of joint committee for preparation of action plan for restoration of Korattur Lake as per the Hon'ble NGT order dated 12.12.2019 and the Government vide GO.No.78 dated 01.06.2020, Environment and Forests (EC-1) Department has constituted the joint committee.*

- *The first joint committee meeting was convened on 30.12.19 and subsequent meetings were convened on 05.02.2020, 13.02.2020, 19.02.2020, 15.07.2020 to finalise the short term and long term action plans of respective line departments for restoration of Korattur Lake.*

- *The joint committee has visited the Ambattur Lake, Ambattur Lake surplus canal, Korattur Lake on 10.01.2020 and ascertained the status of disposal of domestic sewage from households located in the upstream of the Korattur Lake and industrial sewage from Ambattur SIDCO industrial estate, TASS industrial estate, Patavatamman estate and Tiny shed into Korattur Lake and also ascertained the status of disposal of trade effluent generated from the industries located in Ambattur SIDCO industrial estate and private industrial estates into Ambattur Lake surplus canal and Korattur Lake.*

- *During inspection on 10.01.2020, the petitioner was presented along with team and the committee also obtained the suggestions from Korattur People's Welfare & Awareness Trust and included their suggestions in the action plans.*

- *Further, there are 28 number of water and mixed solid samples were collected on 10.01.2020, 11.02.2020 and 02.03.2020 to assess the heavy metals and other parameters such as pH, DO, COD, BOD and Faecal Coliform present in the samples.*

  The following measures are arrived for restoration of Korattur Lake from the action plans submitted by the respective stakeholders.

Avadi Municipal Corporation:

- *The Avadi Corporation has provided the Under Ground Sewer System (UGSS) at Ward No.10, 11, 12, 14 and the trail run carried out by CMWSSB is under progress. After completion of trail run, the connections of houses sewer line with UGSS will be given by the Avadi Corporation.*

- *Due to COVID-19, the Avadi Corporation is not able to proceed any work at ward no. 3,6,7,8,9,11,13,15,16,17,18,19,32,36 & 48 because it comes under cluster of Containment Zone. The detailed project report has been prepared and submitted for administrative approval for 4993 connections which includes Ward No.10, 11, 12, 14 (3571 houses connection) with the estimate cost of Rs.560 Lakhs. After getting the administrative sanction, the Corporation will be placed the tender for house service connections and the work will be started after COVID-19 pandemic as per Govt. Guidelines.*
- *The preparation of Detailed Project Report (DPR) has been completed by Tamilnadu Water Investment Company Ltd for UGSS left out area such as ward no.9 and Annai Sathya Nagar, Periyar Nagar, New Anna Nagar and the land identification for pumping station and sewage treatment plan is under progress. After completion of land identification, the detailed project report with cost will be prepared by Tamilnadu Water Investment Company for further approval. The entire project period will be completed on or before 2025.*
- *The corporation has planned to construct five numbers of collection tanks to collect all the grey water generating at Annai Sathya Nagar, Periyar Nagar and New Anna Nagar area and dispose the same through Sullage water removal vehicle and this temporary measure will be started after completion of COVID-19.*
- *No discharge of sewage into Ambattur Lake after completion of UGSS for above said wards and areas by December 2025.*

Greater Chennai Corporation

- *The Greater Chennai Corporation (GCC) has already started the door to door collection of municipal solid waste from households located around the Ambattur Lake surplus canal and collection of solid waste from Private Industrial Estates and Ambattur SIDCO industrial estate except hazardous waste.*
- *The wastes are being disposed to Athipet Dump Yard of Greater Chennai Corporation for further handling and management as per Solid Waste Management Rules, 2016.*

- *The rectification of damaged sewer line in North SIDCO industrial estate was completed by GCC and the rectification of damaged sewer line in South SIDCO industrial estate by GCC is under progress and it will be completed before 15.10.2020 and after that sewage will be discharged to CSTP located in Ambattur SIDCO Industrial Estate for further treatment and disposal.*

Chennai Metro Water Sewerage Supply Board:

- *The CMWSSB has provided the UGSS at Ward No.81, 82, 85 and connection of houses sewer line are under progress and it will be completed before 31.12.2020.*
- *Provision of UGSS at ward no.79 to 83,84,85,86,87,88,90,92,93 is under progress and will be completed along with houses sewer line connection before 31.12.2021.*
- *The preparation of Detailed Project Report (DPR) is under progress for providing UGSS to the left out area such as Annai Sathiya Nagar (D/86), Sivanandha Colony (D/85), MKB Colony (Depot 85/Ward 85), Patavatamman Estate and Tiny shed / Depot 84/Ward 84 and will be completed along with houses sewer line connection before 31.12.2022.*
- *The discharge of sewage into Ambattur Lake surplus canal and Korattur Lake will be controlled after completion of short term and long term action plan work by CMWSSB.*
- *One of the suggestions of Korattur People's Welfare & Awareness Trust is to provide STP at PWD land near Korattur Lake for treatment of sewage. The installation of STP at PWD land is not required after completion of CMWSSB action plans because all the sewage generated in this area will be collected and pumped into STPs located at Kodungaiyur & Koyambedu for treatment and disposal.*

Public Works Department

- *The construction of Regulator arrangement in DTP colony inlet, Ondiveeran Koil inlet, Weir-2 near North Avenue of Korattur Lake will be completed before March 2021 so as to regulate the rain water.*

- *Providing of Fencing arrangements for 2930 Meter length in the Existing RCC retaining walls in Ambattur Surplus channel to curtail the illegal dumping of solid waste will be completed on or before March 2021*
- *Providing RCC wall with Fencing arrangements on both side of the DTP Colony Channel which leads to Korattur Lake will be completed before April 2022*
- *Removal of hyacinths, weeds, floating materials and desilting of Ambattur Surplus Channel from Ambattur Lake to Korattur Lake by PWD every year.*
- *Proposed to provide wall with fencing arrangements and foreshore bund along the foreshore boundary of Korattur Lake to curtail the encroachments and illegal dumping of solid waste. Proposed to remove the top soils in the areas of sludge formation found in eastern side of Korattur tank and desilting the Korattur Lake and forming of inland island inside the Lake and the entire work will be completed before April 2022*
- *The Korattur Lake is having an extent of nearly 590 Acres and nearly seventy five percent of land area covered by Hyacinths, Prosophis, juliflora, weeds and floating material etc., except the natural species. The removal of Hyacinths, Prosophis, juliflora, weeds and floating material will be carried out by PWD once in two years. The Hyacinths, weeds, floating materials and Prosopis Juliflora had been cleared by PWD in the year 2019.*

TANSIDCO / CAAIIUC:

- *The TANSIDCO has proposed to improve the green belt along the roads in Ambattur SIDCO industrial estate.*
- *The Mixed Solid waste dumped in SP Sector-1 Tiny sector near 15th street, Ambattur Industrial estate will be removed before 30.09.2020*
- *CAAIIUC has engaged M/s.Quality Business System for Collection of Hazardous Waste generated in Ambattur Industrial Estate and already allotted and handed over 5000 sq.ft shed with impervious flooring Collection facility for both South & North phase for SIDCO holders, Currently are collecting from 404 units to a tune of 534 tons per year and within a period of 6 months all the hazardous waste generating units will be covered.*
- *CAAIIUC has provided the new sewer connection for 54 units and the sewer line connection for remaining 175 units will be completed within two months after lockdown.*
- *The standards prescribed for treated sewage discharge into water bodies at Mega & Metropolitan Cities by the Hon'ble NGT order dated 30.04.2019 in OA.No.1069/2018 will be achieved by 3MLD and 2MLD CSTPs with effective operation and maintenance of all the components of CSTPs.*
- *CAAIIUC has identified the mobile Coolant Filtration Machine and Tramp oil Separator for reuse of coolant oil water and the trial run has been done in 3 units and the units are satisfied with the result oriented. New vehicle is arranged to visit individual industry on daily basis which requires coolant filtration service in SIDCO Industrial estate and due to this the discharge of water based coolant oil in sewage is controlled.*
- *The results of sludge analysis reveal the presences of heavy metals in both CSTPs sludge samples which indicate that the electroplating industrial effluents were discharged with raw sewage. CAAIIUC will be disposed the accumulated sludge from both CSTPs to TSDF, Gummidipoondi on or before 27.10.2020.*
- *CAAIIUC is proposed to Increase green cover in Industrial Estate to use treated water to plants and also to units for flushing*
- *The discharge of industrial sewage into Ambattur Lake surplus canal will be sent to CSTPs for further treatment and disposal after providing sewer line connection in unsewered industrial area by April 2022.*

M/s. JBR Technology Pvt. Ltd (CETP)

- *From the analysis of sewage samples collected at CSTPs in both North & South Phase are reveals that no presence of the heavy metals, which shows that no disposal of trade effluent from electroplating and allied industries to CSTPs sewer line.*
- *The CETP is collecting trade effluent generated from the electroplating units regularly for further treatment and disposal.*
- *The CETP has started to execute the works to resolve the issues mentioned in their action plan. The complete recycling of treated water into electroplating industries will be achieved once their action plan is completed by December 2020.*

TASS Industrial Estate:

- *The TASS industrial estate has completed the works mentioned in their action plan. No dumping of mixed solid waste (municipal solid waste and hazardous waste) inside the TASS industrial estate.*

Tamilnadu Pollution Control Board

- *The Hon'ble NGT (SZ) order dated 12.12.2019 has directed the Tamil Nadu Pollution Control Board to inspect the industries, including the*

white category industries in that area and find out whether any violation is committed by them. If there is any violation, they will have to take appropriate action to abate the same and if any upgradation is required on account of pollution load in that area, that also will have to be considered by the State Pollution Control Board and appropriate change of category will have be restored and it will have to be brought under the consent mechanism, if it is required.

- *TNPCB has formed special team consisting of 10 Engineers to carry out inspection of industries from 2.1.2020 and totally 2976 units have been inspected.*
- *Out of these 2976 industries, 784 industries have applied and obtained valid consent, 255 no of industries have closed and vacated their premises, 197 sheds are godowns, 784 no of industries categorised under white category as per BP.No.06 dated 02.08.2016 and 956 units brought under green category based on pollution index.*
- *Water samples are regularly collected in Ambattur surplus canal, Ambattur Lake, Korattur Lake and CSTPs to verify the value of BOD, COD and Faecal Coliform.*

Environmental Compensation levied by TNPCB

- *The 153 number of defaulting industries furnished by the DEE, TNPCB, Ambattur shall remit the interim environmental compensation of Rs.1,09,69,500/- to TNPCB for their violations.*
- *The TNPCB already levied the environmental compensation of Rs.10.35 lakhs for discharged partially treated/untreated effluent into Ambattur Lake surplus canal and the penalty of Rs.29 Lakhs for violation towards the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for the unit of M/s. TI Cycles of India, Ambattur Village, Ambattur Taluk, Chennai District and the same was remitted by the unit and furnished the action plan to comply with the direction by October 2020.*

Joint committee recommendation for removal of heavy metals

- *From the results of analysis of soil samples collected at various locations in Korattur Lake, it was found that the heavy metals are present in the top soil. The PWD shall collect the top soils in eastern side of Korattur Lake while desilting and stored separately. The top soil shall be disposed or utilized accordingly after assessment and remediation if any required for the soil after preparation of Detailed Project Report through an expert by Public Works Department.*

Intervention of Chief Secretary to Government, Government of Tamilnadu

- *As per the Hon'ble NGT order dated 12.12.2019, the Chief Secretary to Government has conducted the meeting on 03.01.2020 and instructed all the stake holders to prepare short term and long term action plan, so as to restore the Korattur Lake.*
- *The Chief Secretary to Government has conducted the meeting on 08.09.2020 and reviewed the action plan furnished by the all the stake holders, Joint Committee reports and instructed all the stake holders to implement the action plan within scheduled time so as to restore the Korattur Lake.*
- *The Chief Secretary to Government instructed that the natural flow shall get facilitated by completion of the action plan by all the stakeholders which will also ensure good quality of water that goes into the Lakes."*

4. It is mentioned in Para 11 of the committee's report the work that has been entrusted to each stakeholders for the purpose of meeting the situation in an effective manner. It is seen from the report that considerable work has been done, on the basis of the directions given by this Tribunal, by the concerned stakeholders for the purpose of protecting the water bodies against the encroachment and pollution. But still some more work has to be completed and unless such work is completed in a war-footing, the effort so far taken by them will be nullified and they will have to continue to proceed with the projects undertaken by them to implement the schemes launched by them for this purpose effectively and quickly as well.

5. It is seen from the report that certain work that has been started has come to a standstill due to the impact of Covid-19 but situation has changed now and people have become effective in their work. So, they can restart their work with the same zeal and see that the work is completed in a shorter time line and not take time till 2025. The environment cannot be allowed to be polluted for such a long time as it will have a greater impact on health of the people. Priority must be given in carrying out the work which is required for the purpose of protecting environment

apart from fulfilling their other statutory obligations of providing other facilities to the people.

6. It is also seen from the report that Pollution Control Board has also taken certain steps against the erring industries including imposition of environmental compensation.

7. It is also seen from the report that result of the analysis of soil at various locations in Korattur Lake, the presence of heavy metals were noted, especially Chromium and Zinc in a higher level. Though, it is seen from the water analysis report that there is some improvement in the quality of the water but steps will have to be taken for further improvement of the same to make it potable level.

8. Further, it is mentioned in the committee's report that they wanted the intervention of the Chief Secretary of Government of Tamil Nadu in certain aspects to quicken the implementation of the action plan that has been proposed by each stakeholder.

9. The learned counsel appearing for the industrial estate submitted that they have not received the copy of the report. In fact, the report was filed in the month of October 2020 and it was uploaded in the website of the Tribunal. They could have downloaded and perused the same. However, when the nature

of progress that has happened after filing of the report was asked for, the counsel representing the committee as well as the individual regulating authorities submitted that if some time is granted, they will come with a progress report. We are aware that it is a long term process as things were not happening in a happy manner for a long time and in order to rectify those things in a right way, they may take some more time. But at the same time, no lethargic attitude should be shown by the stakeholders in implementing the scheme which they have launched and they must show all earnest attempt to complete the work so as to make the Korattur Lake free from pollution and encroachment and create an eco-friendly environment in that area so as to make the life of the people happy and healthy.

10. The learned counsel appearing for the applicant submitted that though earlier the unauthorized sewage connections were blocked and also the electricity connections were disconnected in respect of certain industries but due to political pressure, the same have been opened and the unauthorized industries are still working with the same method of discharge as was been done earlier causing pollution to the river.

11. It is also seen from the subsequent newspaper report published in The Time of India dated 10.12.2019 that the sewage is being let into the Korattur Lake.

12. The learned counsel appearing for the applicant also showed some photographs taken by the residents of the locality which showed the pathetic contaminated condition of the water on account of discharge of untreated effluents into those drains by the industrial units.

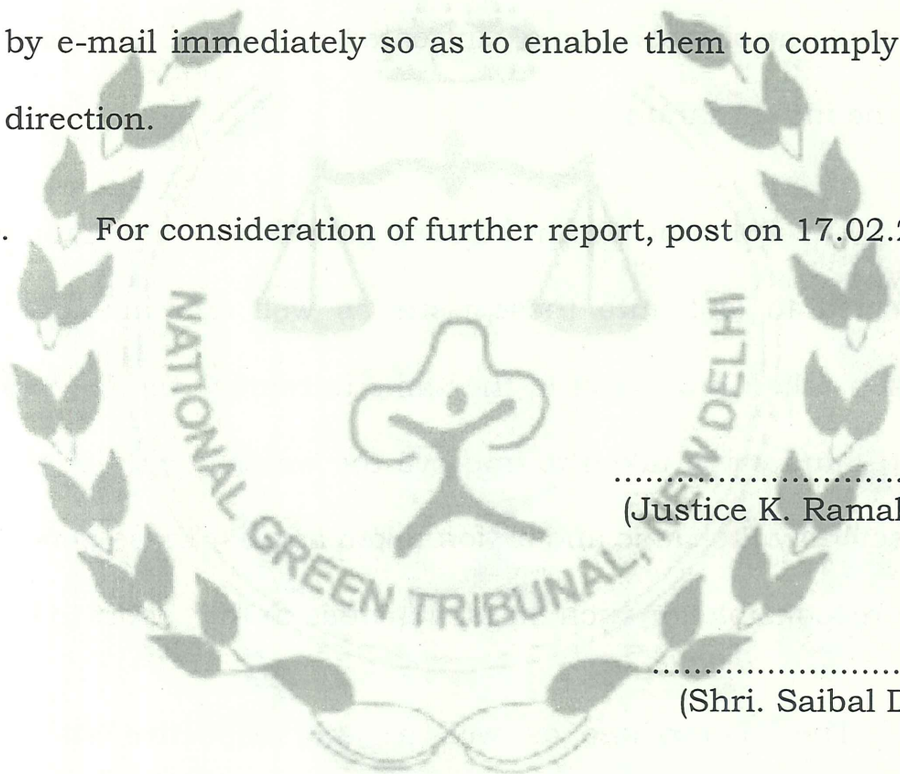
13. The Pollution Control Board as well as the committee are directed to look into these issue as well and incorporate the action taken in respect of the same to remove the contaminated water and steps taken to improve the water quality in the areas affected by the same and action taken against those persons who are responsible for such illegal activities in the report to be filed.

14. The committee as well as the respective stakeholders namely, Tamil Nadu Pollution Control Board (TNPCB), Industrial Estate, Avadi Municipal Corporation, Greater Chennai Corporation, Chennai Metropolitan Water Supply Sewerage Board (CMWSSB), Public Works Department (PWD), CETP operator and Additional Secretary, Municipal Administration and Water Supply Department, State of Tamil Nadu, Member

Secretary, Public Works Department (PWD), State of Tamil Nadu to submit their further progress of the work, action taken and further proposal for improving the situation within shorter time line required for completion of the same in an effective manner on or before 17.02.2021.

15. The Registry is directed to communicate this order to members of the committee and other officials mentioned above by e-mail immediately so as to enable them to comply with the direction.

16. For consideration of further report, post on 17.02.2021.



.....J.M.
(Justice K. Ramakrishnan)

.....E.M.
(Shri. Saibal Dasgupta)

O.A. No.268/2016,
19th November, 2020. Mn.

ANNEXURE - II

Consolidated statement of Report of Analysis of Surface water samples collected at various locations in Ambattur Surplus canal and at the mouth of Korattur Lake

Sl. No.	Parameters	Standard	Ambattur lake surplus canal and the mouth of Korattur Lake on 24.12.2020								
		IS - 2296 - 1982	location 1	location 2	location 3	location 4	location 5	location 6	location 7	location 8	location 9
1	pH	6.5-8.5	7.61	7.46	7.16	6.24	6.93	7.08	7.09	7.67	7.45
2	BOD	3	7	8	12	8	5	86	9	11	5
3	Total Coli form organisms	5000	490	460	68	170	40	1100	45	700	210
4	COD		48	56	72	48	32	376	72	96	32
5	TSS		8	40	52	56	50	118	44	94	190
6	Faecal coliform		76	75	< 1.8	20	< 1.8	140	< 1.8	120	92
7	Flourides	1.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
8	Cadmium	0.01	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
9	Chlorides	600	245	300	335	410	380	375	415	280	280
10	Chromium	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
11	TDS	1500	684	1020	1086	1120	1250	1076	1234	936	902
12	sulphates	400	166	214	145	154	248	244	199	156	164
13	Lead	0.1	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015
14	Copper	1.5	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015
15	Arsenic	0.2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
16	Iron	50	0.12	< 0.5	< 0.5	2.18	1.32	0.45	0.29	0.5	< 0.5
17	Zinc	15	0.01	0.04	< 0.0015	1.63	0.43	0.11	0.12	0.01	< 0.0015
18	Nitrates	50	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
19	Nickel		0.39	0.25	0.28	0.27	0.4	0.42	0.35	0.25	0.02

Location 1 - Near Sathya Nagar --Ambattur lake overflow weir starting point
Location 2 - Near Dhobi colony bridge
Location 3 - Near Premier Steels factory
Location 4 - Opposite to M/s. Godrej Industry
Location 5 - Near Pattravakkam Railway station
Location 6 - Near Karrukku bridge
Location 7 - Near Venkatran Nagar bridge
Location 8 - Ambattur surplus canal south west entry point to Korattur lake (near Karukku bridge)
Location 9 -Ambattur surplus canal south east side entry point to Korattur lake

8/3/2021
District Environemental Engineer
TNPC Board / Ambattur

ACTION PLAN as on 31.01.2021 ANNEXURE - III

Department Name: CAAIIUC

Short Term Action Plan:

S.No	Description of each issues	Action Plan	Action taken	TNPCB Remarks
1	**COLLECTION OF GARBAGE IN INDUSTRIAL ESTATE**	Two locations were identified by SIDCO in 2MLD plant and 3MLD plant with an area of 4500 sq.ft in each location	From 10.02.2020 Greater Chennai Corporation started collecting Garbage from Allotted location.	Greater Chennai Corporation is collecting Garbage from the said locations.
2	**MUNICIPAL SOLID WASTE DUMPED IN THE ROAD**			
I)	Dumping Domestic Solid waste in SP Sector-1 9th Street Ambattur Industrial estate, Chennai-600 058.	Waste will be removed and the area will be fenced accordingly and CCTV will be installed to avoid dumping	Waste removed. Fixation of CCTV camera is in progress and will be completed in a month's time.	Solid waste dumped in the said areas have been removed. It is reported that orders have been placed to carry out the fencing work & CCTV and will be completed by February 2021.
ii)	Dumping of Municipal solid waste in SP Sector- 1 13th Street Ambattur Industrial estate, Chennai-600 058.	Waste will be removed and the nearby units is agreed to fence the area and maintain it to avoid further dumping	Waste removed. Fencing work is in progress and will be completed in a month's time.	
iii)	Dumping of Municipal Solid waste in SP Sector- 1, 1st Main road, 5th Lane, Ambattur Industrial estate, Chennai-600 058.	Waste will be removed and idea of providing gate with CCTV to avoid dumping of waste	Waste removed and Bollard fixed to avoid dumping of garbage. Fixation of CCTV camera has been done by one of our member units for monitoring in future.	
iv)	Dumping of Municipal Solid waste in post office road SP	Area was Cleared and nearby Units agreed to Fence and	Waste removed. Fencing work is in progress and will be completed	

	Sector – 1 near 2nd Street Junction, Ambattur Industrial estate, Chennai-600 058.	maintain the place	in a month's time.	
v)	Dumping of Municipal waste in ATC Road, Ambattur Industrial estate, Chennai-600 058.	Area will be Cleared Immediately, because of entry gate not able to fence the area and Nearby units has agreed to provide CCTV to avoid dumping.	Waste removed. CCTV and fencing work is in progress and will be completed in a month's time.	
vi)	Dumping of Municipal Solid waste in Tiny Sector SP Sector-1, Ambattur Industrial estate, Chennai-600 058.	Area will be Cleared and Fencing will be done by nearby unit holders.	Waste removed. Fencing work is in progress and will be completed in a month's time.	
vii)	Dumping of Municipal Solid waste in 9th Street NP Sector-1, Ambattur Industrial estate, Chennai- 600 098.	Area will be Cleared and Fencing will be done by nearby unit holders and the Quotation has been given for fencing and 4 nearby units has agreed to fence and maintain.	Waste removed. Fencing work is in progress and will be completed in a month's time. Camera has been installed by our member units.	
2a	**MIXED WASTE**			
I)	Mixed Solid waste dumped in SP Sector-1 Tiny sector near 15th street, Ambattur Industrial estate, Chennai-600 058.	Mixed Solid waste will be removed immediately by Authorised Service provider.	The waste has been segregated and disposed through Quality Business System.	Mixed solid wastes were segregated & disposed through Quality Business System.
ii)	Mixed Solid waste dumped in NP Sector-1 9th Street near Padavattamman estate, Ambattur Industrial estate, Chennai-600 098.	Mixed Solid waste will be removed immediately by Authorised Service provider.	The waste has been segregated and disposed through Quality Business System.	
3	**DISPOSAL OF HAZARDOUS WASTE**			

i	Hazardous Waste Generation in Ambattur Industrial estate.	We have engaged M/s. Quality Business System for Collection of Hazardous Waste generated in Ambattur Industrial Estate and already allotted and handed over 5000 sq.ft shed with impervious flooring Collection facility for both South & North phase for SIDCO holders, Currently we are collecting from 340 Unit to a tune of 473 tons per year.	64 New Units has been added and the current waste collection stands to 534 tons per year. However within a period of 6 months hazardous waste generating units will be covered and the report will be furnished	The hazardous waste generating units in Ambattur Industrial Estate dispose the waste through Quality Business & TSDF Gummidipoondi.
ii)	Disposal of accumulated sludge at 2 MLD and 3 MLD CSTP	Accumulated sludge will be disposed to TSDF Gummidipoondi through Tamilnadu Waste Management Limited	Agreement with TNWML has been completed. Filing is under progress with TNPCB for one time authorisation for disposal of accumulated sludge in 2 MLD and 3 MLD CSTP.	CAAIIUC has applied for one time authorization for disposing accumulated STP sludge & the application is under process.
4	**SEWER CONNECTION TO BE EFFECTED TO UNSEWERED UNITS**			
	Unsewered Units	Remaining 226 units has to be connected with common sewer system , in this 40% of the units will be provided in Feb 2020 and the balance will be completed in March 2020.	New Sewer Connection for 94 units has been completed. Sewer Connection for the remaining units will be completed within 2 months.	-
5	**COOLANT DISPOSAL**			
	The Coolant water is used by machining units using CNC/VMC	2 Nos. of coolant filtration machine has been purchased	Two nos. of Coolant filtration machine has been purchased and	CAAIIUC has installed two mobile coolant filtration

	machines. It is a mix of 95 to 97% of de-mineralized water and 5 to 3 % of water soluble coolant addition to keep the temperature down, so that the heat generated during the machining operation does not affect the material machined or the insert used. The units are using high value synthetic additive made by companies like Quaker USA, Blazer Switzerland etc which do not degenerate during use. Therefore the only requirement is filtering of the coolant and periodic removal of tramp oil floating on the coolant.	and the same is running effectively. We have plans to invest for another two more coolant machines, based on the response we get from our member units.	successful installation done Coolant filtration work is in progress to all our Member units. We are sending the machine through our Tata ACE vehicle to each company, whoever wants to do the coolant filtration. We have appointed a person for doing this filtration work, who will be visiting each factory personally with the filtration machine and so far he has completed 18 companies.	machine and the coolan waste generated from the industries in Ambattur Industrial Estate are treated through this system and recycled
6	**3MLD & 2MLD STP**			
	Treated water is not upto board standards	Both 2MLD & 3MLD STP is effectively running	Monthly test samples taken from 3mld & 2mld , shows Faecal Coliform is under limits	Samples collected at CSTP (3 MLD & 2 MLD) during November 2020 & December 2020 reveals that the parameters BOD , COD are within the standards prescribed by the Board and Faecal Coliform shows marginal increase in the standard prescribed by the

				Board. but within the permissible limit.

Long Term Action Plan.

7	**SEWER MAIN LINE TO BE PROVIDED IN UNSEWER AREA**			
	Unsewered Area, i) 3rd main Road Near athipet petrol bunk (94c/1, 94c/2, 94c/3 & 94c/4 has to be connected. Chennai-58. ii)1st Street SP sector-3, Ambattur Industrial estate, Chennai-58. iii) 3rd Main Road NP Service Road, NP Amabttur industrial estate, Chennai-98.	i) Survey has to be done for giving sewer connection to the unsewered area and after survey the work will be commenced. ii) Land survey has to be done with revenue people opposite to Telephone Exchange to carry the sewage work.	2 years	
8	**3MLD & 2MLD STP**			
	Reusing of Treated water	It is proposed to Increase green cover in Industrial Estate to use treated water to plants and also to units for flushing.	CAAIIUC has engaged an Engineer to Identify area to increase the increase Green Cover inside our estate, Accordingly few places have been air marked and the same will be taken up for Increasing Green Cover. Tree plantation has already commenced	Green belt development under progress.

			and completed 2000 nos. on the 1st week of October 2020.	

DEE/TNPCB/AMB

ACTION PLAN as on 31.01.2021

Department Name: **TASS INDUSTRIAL ESTATE WELFARE ASSOCIATION**

Short Term Action Plan:

Sl.No.	Description of each Issues	Action Plan for the Issues	Target Date	TNPCB Remarks
		The mixed garbage has been cleared with the help of the municipal authorities and dumped into the garbage yard.	Completed	The wastes in the said locations have been removed by February 2020 itself.
1	Dumping of Hazardous waste near Mahatma Gandhi 3rd Street,Tass Industrial Estate,Chennai-98	The hazardous waste is removed through M/s.Dharani Barrels,No.G57/1, Sidco Industrial Estate,Kakkalur,Tiruvallur on 21.02.2020	Completed	
		The bags has been send for recycling by the person who has kept it outside & it has been informed to him not to keep any thing outside the compound.	Completed	
2	Dumping Of Hazardous waste in the water stagnation area,adjacent to Mahatma Gandhi Road, Tass Industrial Estate,Chennai-98	It has been cleared and there is no wastage near the water stagment area.	Completed	

DEE/TNPCB/AMB

16/02

Department Name: **M/s. JBR Technologies Ltd**

Short Term Action Plan:

Description of each Issues	Action plan for the Issues	Target date	TNPCB Remarks
Improvements of existing CETPwith addition or increase the capacity of components/equipments	1. InstallationofCollectiontankupto120KLforcontinuous Preparation ofBatches.	Upto 31.03.2021	Reported that the installation will be completed by March 2021
	2. Installation of Reactors & Tube settlers up to 120 KL	Completed	Reactors and tube settlers arrived in the site, but not installed yet. It is reported that the same will be completed by March 2021.
	3. Regeneration system of Cation and Anion exchangers	Completed	It is reported that the regeneration of Cation and Anion will be carried out during February 2021.
	4. Arrangement of Blowing air system for Degassifier	Completed	Blowing air system provided in degasser
	5. Modification of Reverse Osmosis system to reduce Reject water (Single stage to triple stage)	Completed	One stage reverse osmosis system completed and second &third yet to be provided
	6. PreparationofDMwaterbyinstallationofMixedion Exchange	Completed	Reported that the DM water pant installation will be completed by March 2021
	7. InstallationofFilterpressorThickenerforsolid sludge formation	07.03.2021	Filter press purchased & reported that installation of the same will be completed by March 2021
	8. Insulation of MultiEffective Evaporator to reduce Heat loss/Risk probability	15.03.2021	Reported that the installation will be completed by March 2021.
	9. FabricationofDrainlinefromMEEtoSludgeblankets	15.03.2021	

ACTION PLAN OF TAMIL NADU POLLUTION CONTROL BOARD

ACTION PLAN AS ON 31/01/2021

Department Name : Tamil Nadu Pollution Control Board

Direction 1:

The Hon'ble NGT in its order dated 12.12.2019, directed

"The Tamilnadu Pollution control Board to inspect the industries, including the 'white ' category industries in that area and find out whether any violation is committed by them. If there is any violation, they will have to take appropriate action to abate the same and if any upgradation is required on account of pollution load in that area, that also will have to be considered by the state Pollution Control Board and appropriate change of category will have be restored and it will have to be brought under the consent mechanism, if it required"

Direction 2:

"The state Pollution control Board is also directed to consider the BOD, COD and faecal coliform present in the water in that area in order to ascertain the quality of the water and find out whether they are complying the norms whether the existing system is adequate to meet the situation. If not, proper alternate mechanism to meet the condition or standardisation of the STP to meet the situation has to be done. They are also directed to consider the criteria to ascertain the presence of dangerous metals, if any, which is likely to affect the human health"

Action Plan:

Sl. No.	Description of each issues	Action plan for the issues
1	TNPCB to inspect all the industries, to take appropriate action on violating units.	As per the NGT order dated 12.12.2019, • A special team was formed consisting of 10 Engineers to carry out inspection from 2.1.2020 and have completed inspecting all the industries. • 2976 units have been inspected totally.

Long Term Action Plans

Description of each Issues	Action plan for the Issues	Target date	
ImprovementsforreduceCost &best treatmentpractices	Installation of ATFD for MEE Concentrate converts to solid form.	Since the quantity of slurry is very small, therefore the viability for installation of ATFD is being considered with Ambattur industrial estate manufacturer's association. The time taken for the installation of the same will be about three months	Reported that the installation will be completed within three months.

DEE/TNPCB/AMB

16/12

		• Out of these 2976 industries, o 849 industries have applied and obtained consent, o 255 no of industries have closed and vacated their premises o 197 sheds are godowns o 1675 no of industries categorised under white category as per BP.No.06 dated 02.08.2016 which are not required to obtain consent of the Board as per CPCB revised categorization. • Out of 1675 units, 891 industries are involved in machining operations using CNC machines which uses coolant diluted with water (95% water and 5% coolant) for the purpose of cooling during machining operation. • These machining industries do not generate waste on a daily basis. Coolant water is being re-circulated and once it has become contaminated, the waste coolant is let out. • The frequency of letting of coolant varies between once in 3 month /6 months/ one year/ 2 years and the quantity varies between 10 litres / annum to 1000 Lit/ annum. • CAAIIUC has provided 2 Nos. mobile treatment systems for reuse of coolant water and ordered for another two machines. Based on the requirements CAAIIUC planning to increase the mobile treatment systems. Industries have been instructed to make use of mobile system to treat and reuse the coolant water. • The units have been strictly instructed not to dispose the coolant water either in the sewer or any other water source and to store the coolant in barrels as and

		when generated and recycle the same after treating in the mobile system provided by CAAIIUC. • As CAAIIUC has provided mobile filtration units for coolant to the micro and small scale member units (891 Nos. of white category industries) in Ambattur Industrial Estate and as the CAAIIUC takes the responsibility of treatment and reuse of coolant from the member units, the CAAIIUC shall ensure that the coolant generated from these industries are not disposed outside the premises either in the sewer / storm water drain or on land under any circumstances.
2	The TNPCB was directed to consider the BOD, COD and faecal coliform present in the water in that area in order to ascertain the quality of the water and to comply with the norms and to check for adequacy of existing system . If not, alternate mechanism or standardisation of the STP to meet the situation	**1.Ambattur surplus canal** • Samples have been collected in the Ambattur surplus canal and the ROA reveals that the value ranges of BOD, COD, Faecal Coliform indicates that the channel is contaminated with untreated sewage from the nearby unsewered areas. • CMWSSB has to take action to provide sewer system to unsewered areas and to take action to provide connection with the sewer system so as to treat the same in the existing STP provided at Kodungaiyur and Koyambedu for further treatment and disposal. CMWSSB has given action plan to provide sewer to the unsewered areas. 2. **Common STP provided by CAAIIUC** • Samples collected at CSTP (3 MLD & 2 MLD) during November 2020 & December 2020 reveals that the parameters BOD , COD are within the standards

		prescribed by the Board and Faecal Coliform shows marginal increase in the standard prescribed by the Board, but within the permissible limit. • However, as the unit has not complied with the condition for mode of disposal and certain other conditions, the unit of M/s. Chennai auto Ancillary Industrial Infrastructure upgradation company Limited (south phase and north phase) has been levied a sum of Rs. 332 Lakhs as Environmental compensation on account of the violations observed.
		• The SIDCO & CAAIIUC had given representation during the review meeting held on 08.09.2020 under the chairmanship of the Chief Secretary as the member units of the CSTPs are small scale units and not able to remit the environmental compensation amount of Rs. 3.32 Crores due to their unavailability of business during COVID – 19 pandemic and requested to waive the same. In this regard, the Chief Secretary instructed the Tamilnadu Pollution Control Board to withdraw the environmental compensation amount of Rs. 3.32 Crores imposed on two CSTPs at Board level / Government level.

District Environmental Engineer
Tamil Nadu Pollution Control Board
Ambattur

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No. 268 of 2016 (SZ)

Korattur People's Welfare & Awareness Trust Represented by Mr. S. Sekaran Founder and Managing Trustee Korattur, Chennai – 600 076.

...Applicant(s)

Vs

Government of India,
Rep. by its Secretary, Ministry of Environment, Forests & Climate Change, New Delhi and Ors.

...Respondents

REPORT OF THE TAMIL NADU POLLUTION CONTROL BOARD AS THE HON'BLE NGT ORDER DATED 19.11.2020 IN O.A.NO.268 OF 2016(SZ) .

Advocate for Respondent: TNPCB
Thiru.C. Kasirajan,
Advocate, Chennai.

Date: 15.03.2021.

Date of hearing on 18.03.2021