BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 125 / 2018

IN THE MATTER OF

Arvind Pundalik Mhatre

v/s

Ministry of Environment & Forest and Climate Change & Others

Mr. Justice V.M. Kanade
Former Judge of Bombay High Court .. Chairman

Dr. Prasoon Gargava
Scientist-E,
Representative of the Central Pollution Board .. Member

Dr. Vijay Suryawanshi
District Collector, Raigad .. Member

## REPORT IN COMPLIANCE OF THIS HON'BLE TRIBUNAL'S ORDER DATED 17TH AUGUST 2018

1. Pursuant to the directions given by the Hon'ble National Green Tribunal (**"Hon'ble NGT"**) vide its order dated 17th August 2018, this Monitoring Committee was appointed and the following directions were given to the Committee.

(a) To take stock of all the actions taken so far in the light of various directions of the Tribunal.

(b) To propose time bound action plan to deal with the problem.

(c) To prepare comprehensive, integrated and inclusive strategy with clear measurable indicators of progress and success.

(d) To prepare a plan to reverse the damage caused and to prevent further damage.

2. The Committee held its preliminary meeting on 5th September 2018 and gave directions to all the stakeholders to take appropriate steps. An action plan was also prepared and a copy thereof was sent to the Hon'ble NGT. According to the action plan, it was decided to invite all stakeholders and take their inputs and suggestions for the purpose of initiating the process of taking remedial measures. Accordingly, after the inputs and suggestions were received from the stakeholders, this Committee held its second meeting on 21st September 2018 and

an action plan was prepared to implement the directions given by the Hon'ble NGT.

3. During the assessment of the problem, it was brought to the notice of the Committee that for almost more than two decades no action has been taken by the co-operative society which was in charge of management and supervision of the Common Effluent Treatment Plant **("CETP").** This had resulted in the accumulation of about 6,000 MT of sludge. Some of the sludge was there for almost two decades.

4. It was noticed that, the accumulation of sludge to a large extent was responsible besides non-conformity of influent quality with design at inlet of CETP for the standards not being maintained as per the norms in the discharge of effluents which were released in the creek. It was also felt necessary to invite tenders, obtain required concurrence from various agencies to start this process of removal of sludge and restoration of normal standards of effluents in the creek. It was brought to the notice of the Committee that a number of industries were surreptitiously releasing effluents at night without treatment and this has further

aggravated the problem. It was not possible to know which are the industries releasing effluents.

5. Tenders were invited for completion of work in various fields. It must be mentioned here that initially the CETP was 10 MLD which was increased by 2.5 MLD and became 12.5 MLD and thereafter increased by 10 MLD in 2008, and now a proposal is made to upgrade it by another 5 MLD the construction for which is going on. After the construction of CETP of 5 MLD, the total capacity of CEPT would be 27.5 MLD.

6. The Taloja MIDC was commissioned in 1968. The CETP managed by the cooperative society, viz. Taloja CEPT Cooperative Society (**"Taloja Society"**), was 10 MLD. It is a matter of record that the Taloja Society did not take any step whatsoever in maintaining the CEPT, with the result the pipeline had become deteriorated and several other problems had crept up on account of their negligence. This resulted in the gradual deterioration of the standards which were required to be maintained for the treatment of effluents. There was also an increased in the number of industries in the Taloja MIDC. This resulted in increasing the capacity of CETP to 12.5 MLD. This

resulted in increasing the capacity of CETP to 12.5 MLD. This happened in the year 1998. On account of improper and negligent treatment of the effluents by Taloja Society, huge sludge was accumulated which was not treated and gave rise to environmental pollution and also resulted in the air being polluted and noxious fumes emitted from the sludge resulted in foul odor in the entire area. Taloja Society commissioned CETP of 10 MLD capacity in 1996. Thereafter again the CETP capacity was increased by 2.5 MLD in 1998. In 2008, CETP capacity was increased by 10 MLD. During all this period, the sludge however remained in the tank and in spite of increase in the CETP capacity, the discharge of effluents did not improve as required and expected. Several complaints were received from the residents and workers Union regarding the state of affairs of increase in pollution.

7. An application was filed in the Hon'ble NGT in the year 2017. This application was initially filed at the Western Region, Pune Bench which was transferred to the Principal Bench at Delhi. Initially several orders were passed by the Hon'ble NGT and reports from MIDC and MPCB were invited regarding the condition and state of affairs in respect of pollution. A joint

survey was made by CPCB and MPCB who submitted their report to the Hon'ble NGT.

8. Since the Taloja Society was not taking any steps for maintaining the CETP, MPCB directed the MIDC to take over the charge of CETP on 20th March 2017 and 1st November 2018 respectively. MIDC appointed a consultant to study the situation and upon receiving the report, invited tenders for further expansion, rehabilitation and upgradation of CETP by 5 MLD. M/s KDC Aqua was appointed to carry out the work of upgradation and maintenance of CETP. The said company took charge from 1st November, 2018. They did their study and prepared work plan which was submitted to this Committee. This Committee prepared a schedule for the purpose of implementation of the said plan. M/s KDC Aqua realized that, it was first necessary to remove the huge sludge which was accumulated for the past more than two decades. The sludge of 4264 MT was removed within a period of 3 months and an upgradation was made to the existing tanks. A number of pipelines have been damaged on account of accumulation and non-removal of sludge in the pipelines. These pipelines were replaced one by one along with other progress made after the removal of sludge. The

**photograph of the condition before and after the removal of sludge is annexed herewith and marked as Annexure-1.**

9. It is necessary to understand the nomenclature which has been used in respect of upgradation of CETP. The CETP which was installed in 1998, i.e. 10 MLD + 2.5 MLD, has been referred to as Phase-I. Thereafter 10 MLD CETP capacity was increased in 2008. This has been referred to as Phase-II. The present project of increasing it by further 5 MLD is known as Phase-III.

10. As a part of the work plan, a decision was taken by MPCB and MIDC to revamp the 10 MLD CETP which was constructed in Phase-II and to keep 12.5 MLD CETP operational during this time. The load on this 12.5 MLD CETP therefore increased to some extent. Simultaneously the work of upgradation of 10 MLD CETP has started on 1st November, 2018 and completed on 15th July, 2019. This included de-sludging, de-watering and rehabilitation. Phase-II, i.e. upgradation of 10 MLD CETP, has now become operational.

11. MIDC and MPCB made a survey and found out the industries who were complying with the MPCB norm. The effluent from

individual units to the extent of a sum of 7 MLD, which was found to be in order complying with all the parameters in line with the norms of outlet of CETP, was then separated and connected to the discharge line of the CETP outlet reducing the load on the 10 MLD CETP. Now the work of up-gradation of 12.5 MLD CETP, which is known as Phase-I, has now started and the de-sludging of the same is already over. The civil work will be completed by November 2019. **The photographs showing the position of Phase-I as it was prior to the Committee taking over and the position now are annexed herewith and marked as Annexure-2.**

12. It is estimated that Phase-I, i.e. the original CETP, is now proposed to be made operational by the end of November 2019. However, because of the unprecedented and prolonged monsoon, it may take another one month to make it operational. Once Phase-I becomes operational, to a large extent the parameters will come down to almost normal.

13. The work of expansion of CETP i.e. Phase-III, 5 MLD CETP, has already been started and is in progress and is expected to be over by March 2020 and latest by May 2020.

14. It has to be noted here that all this has been done in less than a period of about one year starting from 1st November 2018. We must also note that though efforts have been taken by MPCB and MIDC, relentlessly for the past more than one year and substantial progress has been made, the Taloja Society has not given its cooperation and it continues to discharge effluents adding to the problem of maintenance of CETP. Directions have been given by the Hon'ble NGT from time to time to take action against the erring industries. First direction was given on 9th April 2019. This direction was fully complied by MIDC and MPCB and action was taken against those industries of closure / shut down, imposition of penalty and initiation of prosecution, wherever necessary, till remedial steps were not taken by those industries.

15. At this juncture, it must be pointed out that the applicant has been making several complaints, some of which are unfounded, and creating an impression that no steps have been taken by MIDC and MPCB which allegations are not true. It has to be noted that though there may be some delay in adhering to the schedule fixed by this Committee, both MIDC and MPCB have

been taking efforts to adhere to this schedule. This year, the area in which the Taloja Society is situated, has faced unprecedented rain for the last four months, but the progress in work by M/s KDC Aqua, MIDC and MPCB has continued despite the heavy rainfall. The stakeholders, viz. MIDC and MPCB, have been relentlessly doing their work for the purpose of complying with the directions given by the Hon'ble NGT and for the purpose of adhering to the action plan prepared by this Committee.

16. We are confident that once Phase-III expansion is over by March 2020, all the parameters in respect of outflow of the effluents will be complied with.

17. During last one year, the successful bidder – M/s KDC Aqua has also put in place the online monitoring system so that the effluents discharge by CETP can be monitored. **The photographs of the online system are annexed herewith and marked as Annexure-3**. Similarly, as a result of the steps taken during the last one year, the quality of water after primary and secondary treatment has considerably improved. **The photographs showing the position prior to treatment and**

**post treatment is annexed herewith and marked as Annexure-4.**

18. It must be noted that when the work started in November 2018, the inlet COD was 4500 to 6000. In the last one year, it has come down to close to 2000 mg/lit. Hence, CETP design parameter i.e. inlet norms is 2700 mg/lit is already achieved. The outlet COD was around 2300 mg/lit which has now been reduced about close to 500 mg/lit.

19. Taking into consideration the above facts, we are of the view that there is substantial progress in the reduction of pollution at all levels. The work of restoration of damage done also has begun and steps are being taken both by MIDC and MPCB for obtaining detailed project report from IIT, Mumbai and thereafter tenders would be awarded for restoration of Kasardi River which is 7 km. long.

20. The directions given by the Hon'ble NGT on 3rd September 2019 and 30th September 2019 also have been fully complied with. MIDC has already deposited the remaining amount with the Collector. Steps will now be taken to ensure that this amount

would be utilized for restoration and rehabilitation of the river and surrounding areas.

21. The action plan for restoration work, which is referred to in the order dated 3rd September 2019, has to be submitted by MPCB, and wherever possible by MIDC. The action plan will be implemented by various agencies. It may be necessary to appoint a Nodal Agency for the purpose of restoration work. As a result of removal of sludge and other action taken, the foul odor emanating from CETP has been reduced by about 90%.

22. We would like to humbly submit that the work of the Monitoring Committee may be extended by another six months to ensure that the remaining work is completed as per the schedule . MIDC in its report submitted to the Hon'ble NGT has mentioned that they propose to extend and install a treated effluent disposal pipeline of 3.3 km. so that the treated effluent can be discharged directly at the point suggested by the National Institute of Oceanography. If this pipeline is installed, it will further reduce the pollution not only in Kasardi River or the creek, but will solve the other problems with regard to pollution. It is stated by the MIDC that this may take another two clear seasons for

installation of pipeline. We are of the view that this suggestion may also be considered by the Hon'ble NGT.

23. It must be noted here that MIDC has spent almost Rs.80.72 crores in rehabilitation, retrofitting of CETP, remodeling and segregation of effluent collection system, replacing damaged portion of disposal lines, removing huge quantity of almost 4300 MT of sludge from various units of CETP and completed the retrofitting and rehabilitation work of 10 MLD capacity Phase-II in about 8 months. MIDC has further proposed the future expenditure of Rs.196.65 crores (as per Annexure 2 of the Report).

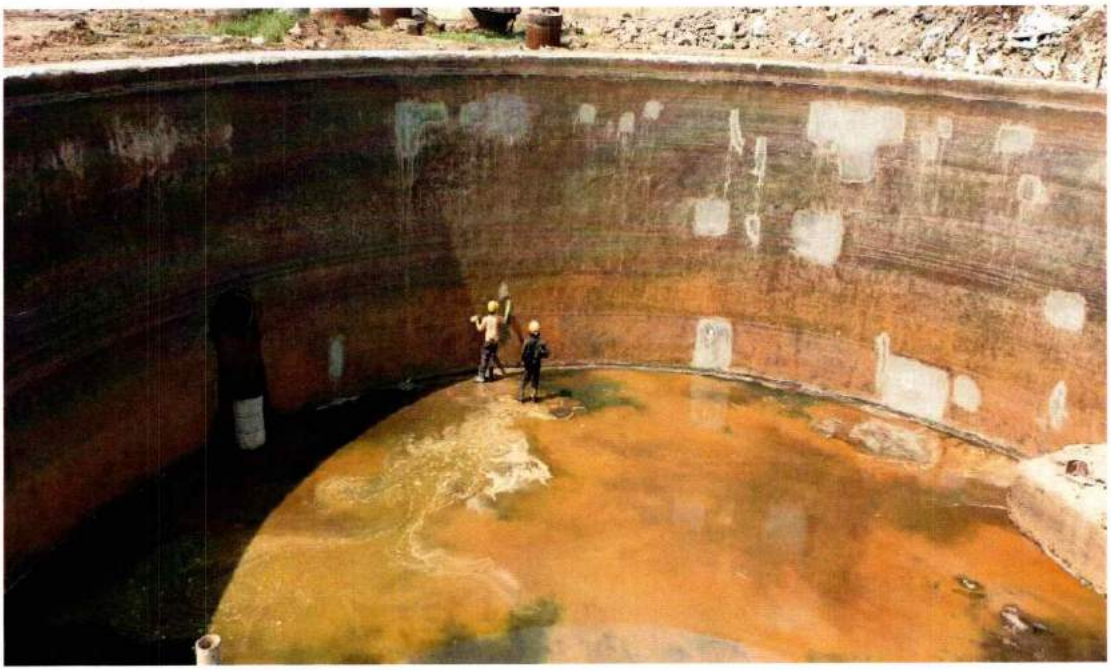
24. It is humbly submitted that this report may be taken on record.

**Justice V.M. Kanade (Retd.)**
**Chairman**

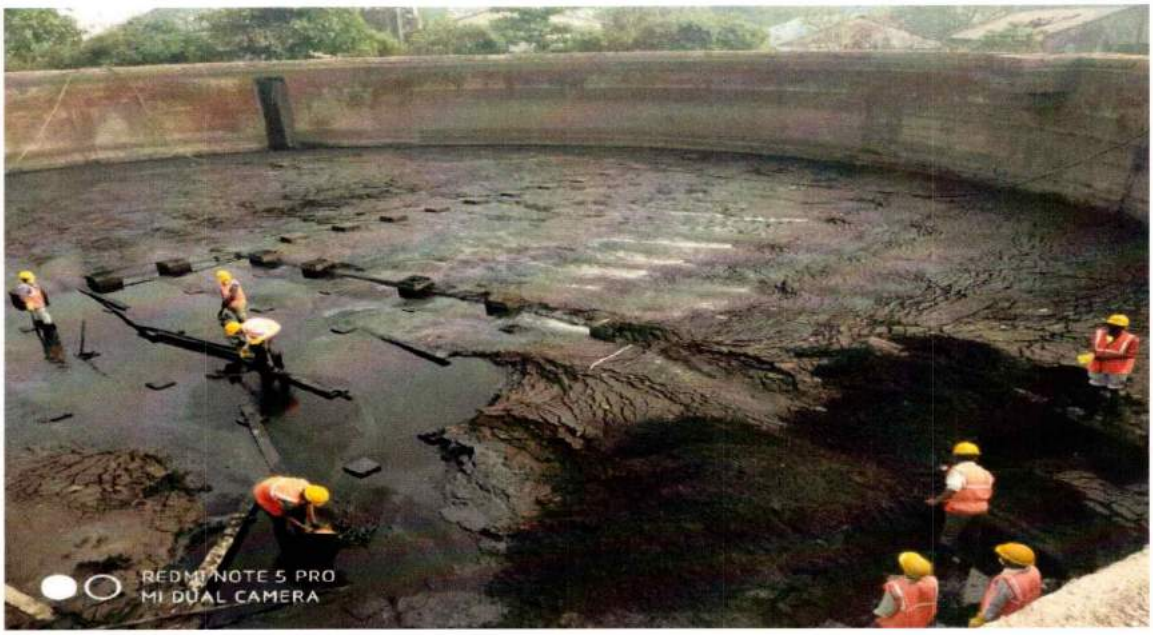
**7th October 2019**

Annexure- 1

PHASE II COLLECTION TANK DURING PROGRESS



PHASE-II EQUALISATION TANK SLUDGE DURING PROGRESS



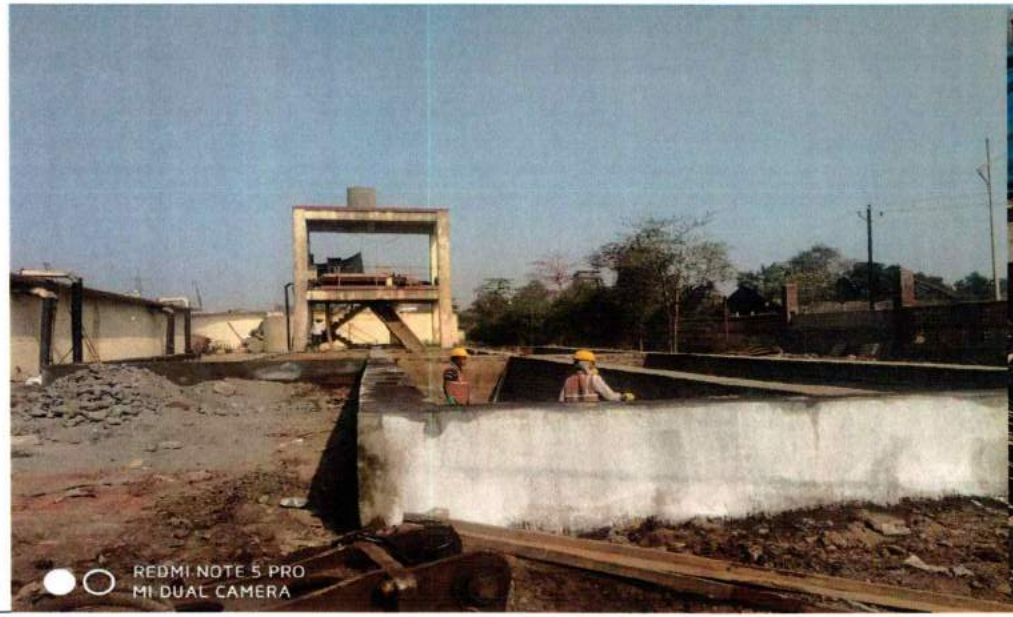
KDC-Aqua

# Sludge drying beds

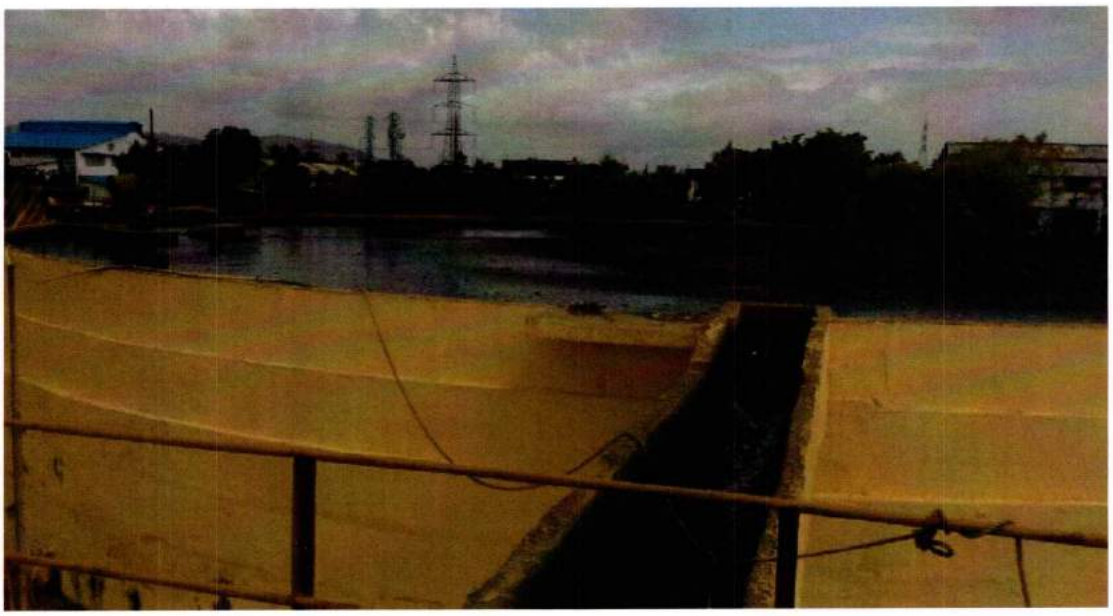
## Initial status

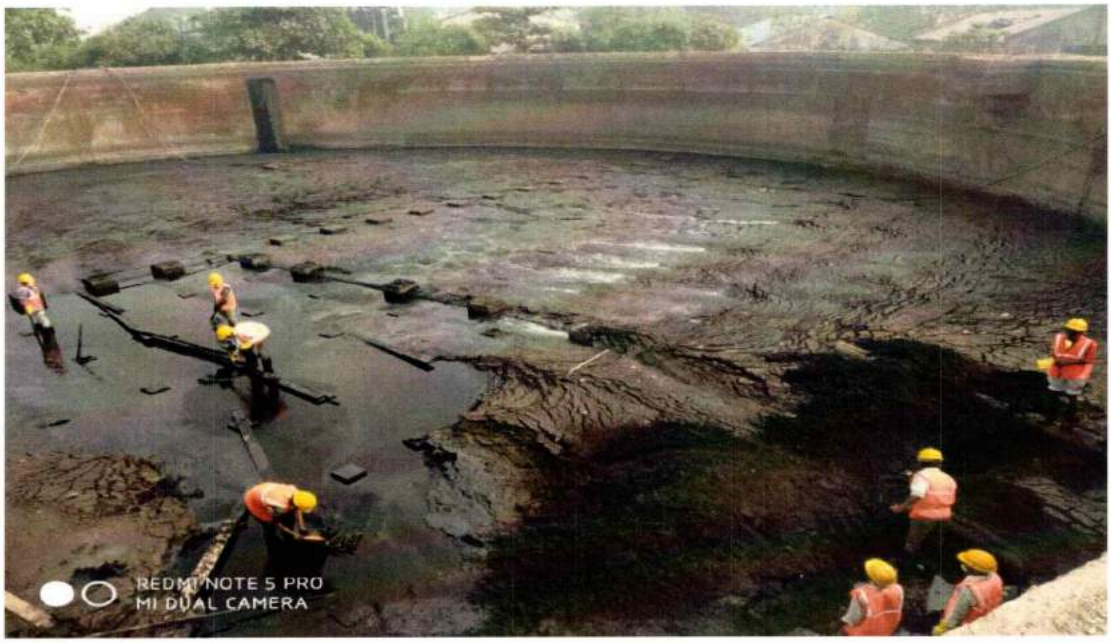

## Sludge bund constructed


## Sludge Removed and repaired




PHASE – II EQUALISATION TANK





KDC-Aqua

# Action Taken
# Equalization Tank

## INITIAL STATUS



## Rehabilitation Activity

**After Sludge removal from Equalization Tank, Plant-II cheeping was carried out.**

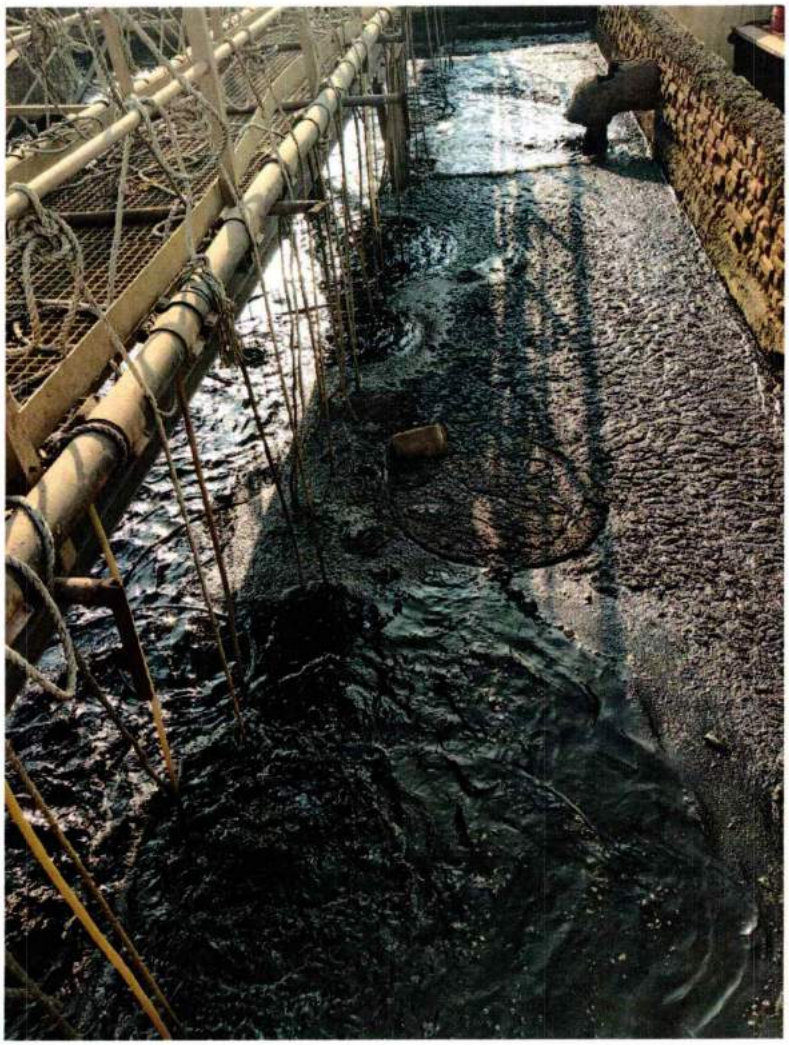
SLUDGE DRYING – BEDS

KDC-Aqua

# Primary Clarifier

## INITIAL STATUS

## After Rehabilitation Activity
## After Sludge removal and Cleaned



# Annexure - 2

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# Phase- I Aeration tank Cleaning

KDC-Aqua

# Phase- I Secondary clarifier Cleaning

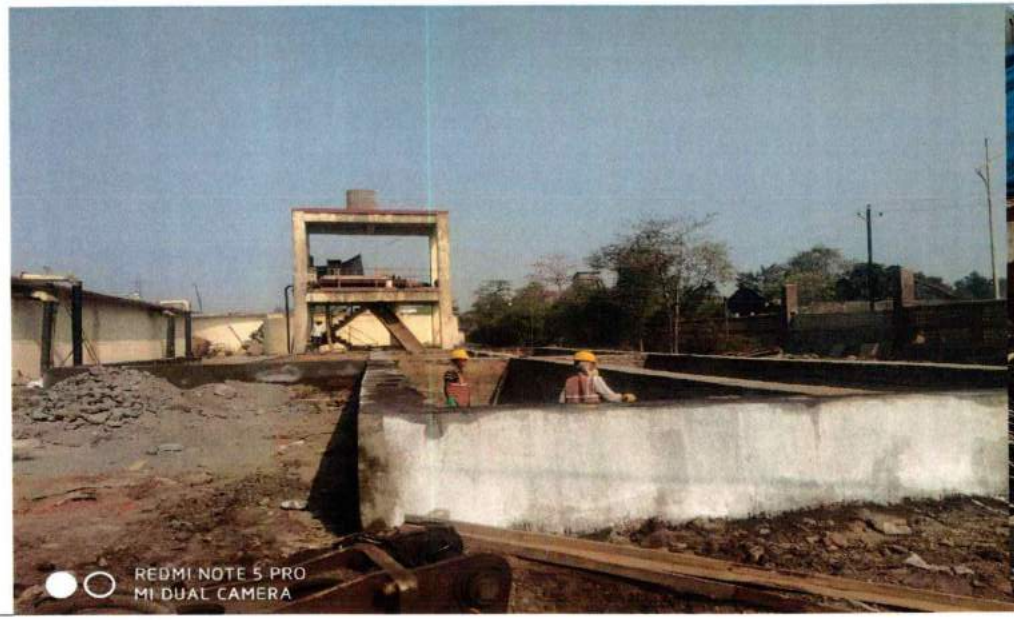
KDC-Aqua

# Sludge drying beds

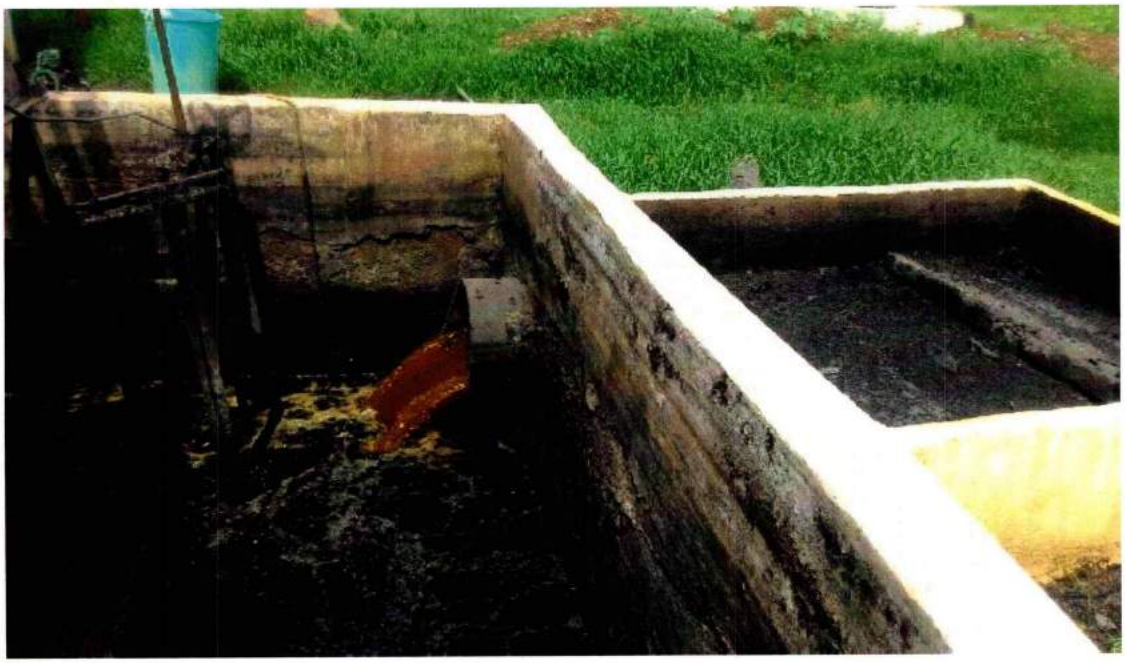
## Initial status


## Sludge bund constructed

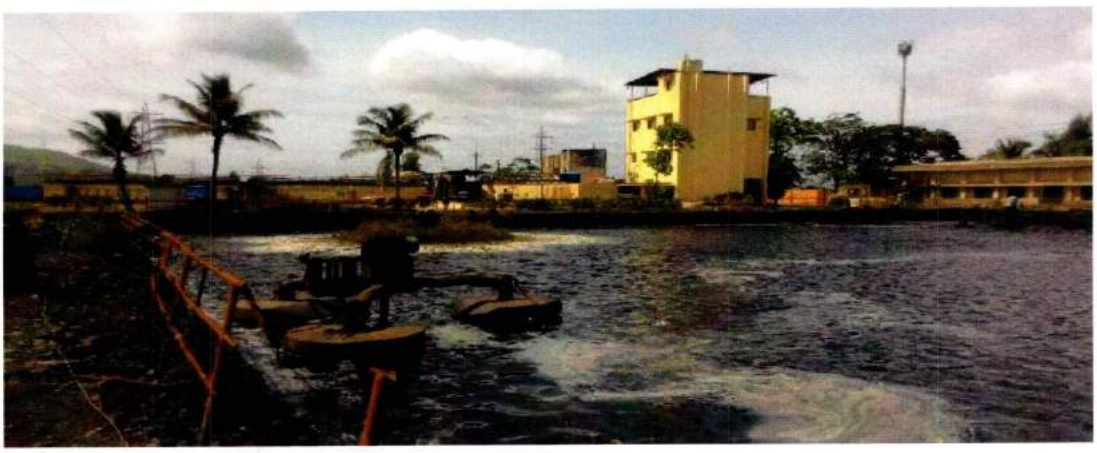

## Sludge Removed and repaired



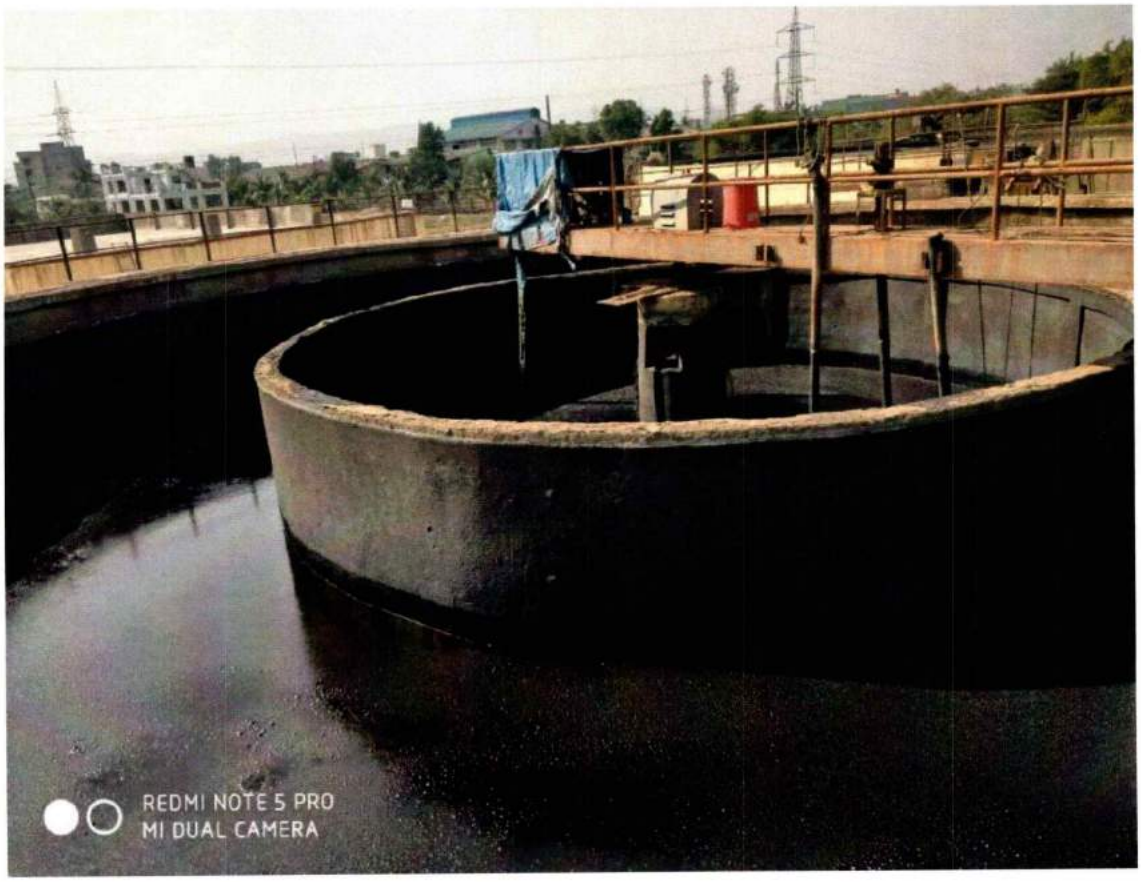

SCREEN CHEMBER- PHASE I



PHASE I – COLLECTION TANK FULL OF SLUDGE



PHASE-I PRIMARY CLARIFIER




PHSAE- I AERATION TANK

PHASE I - AERATION TANK –

PHASE- I SECONDARY CLARIFIER

Annexure-3

**ONLINE MONITORING SYSTEM AT INLET CHEMBER**


**ONLINE MONITORING SYSTEM AT OUT LET**

**CETP ONLINE FLOW METER AT INLET AND OUT LET – V-NOTCH**

**INLET**

**FLOW 457.66 x 24 Hrs = 10.98 MLD**


OUTLET

FLOW 410.24 x 24 Hrs = 9.85 MLD

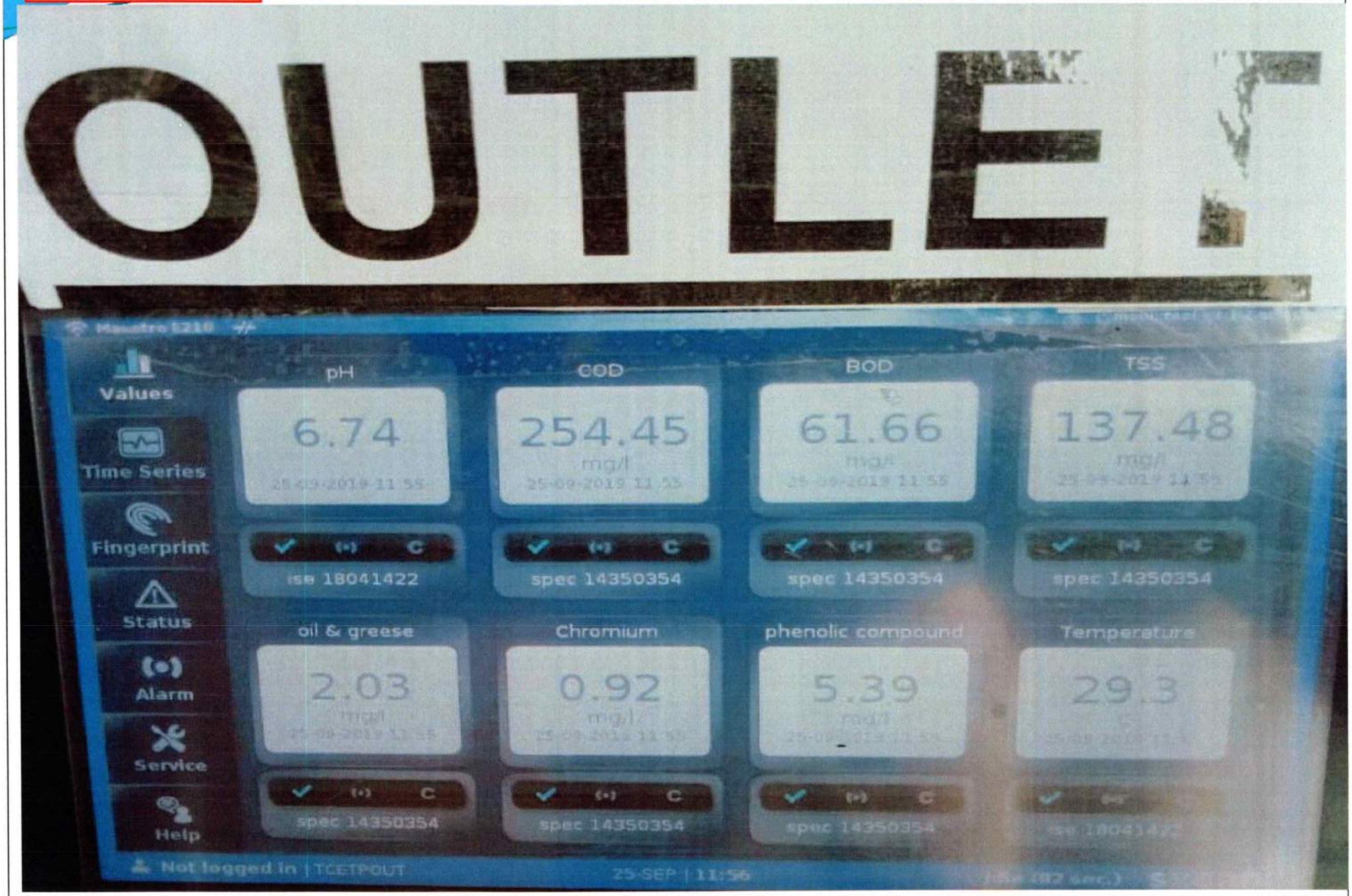
KDC-Aqua

# Online Flow meter Readings for the Month of September -2019

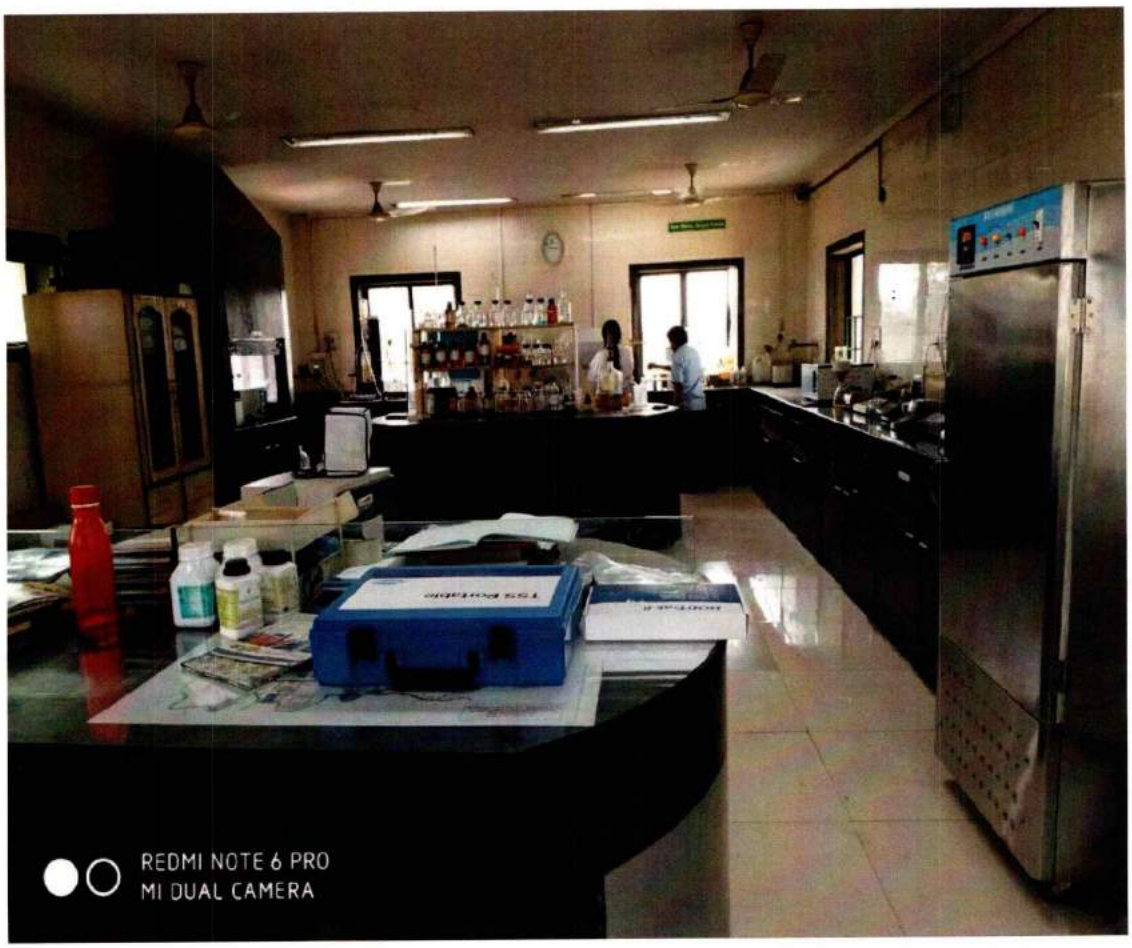



KDC-Aqua

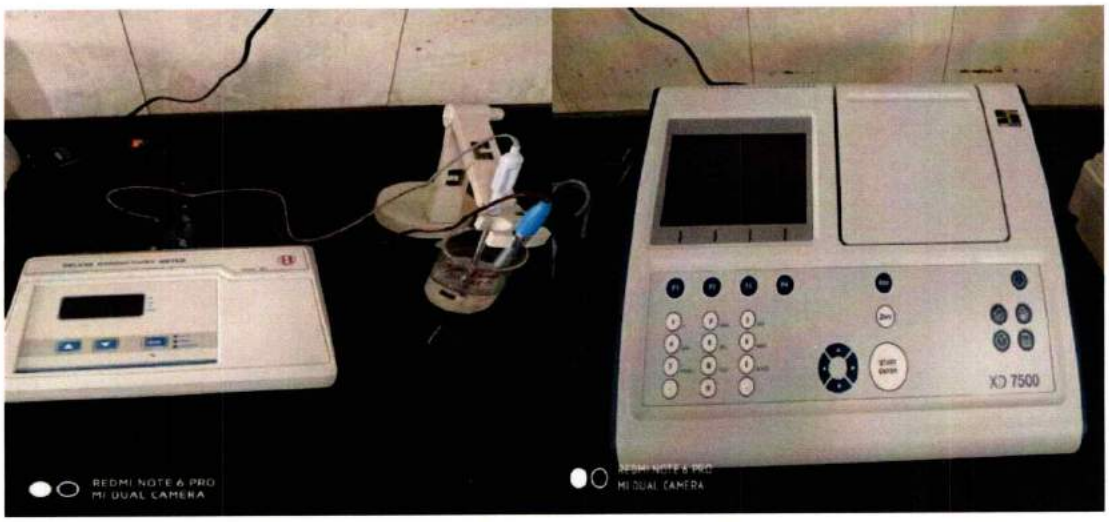
# Online Monitoring System – Sep- 2019



**CETP Laboratory equipped with new instruments**

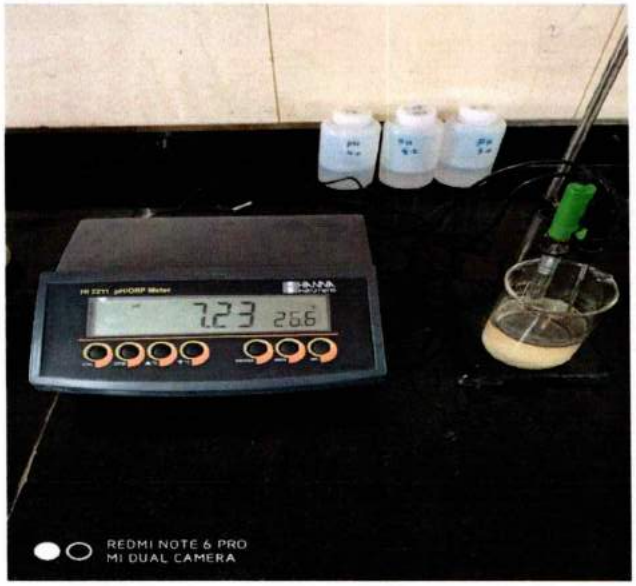



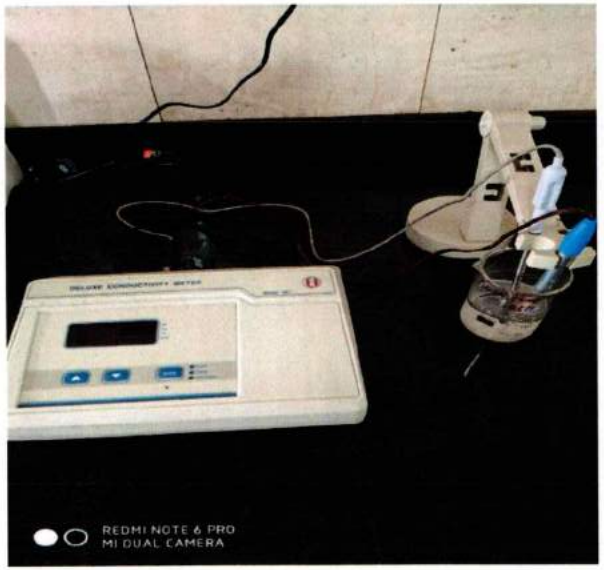
**CETP Laboratory equipped with new instruments**

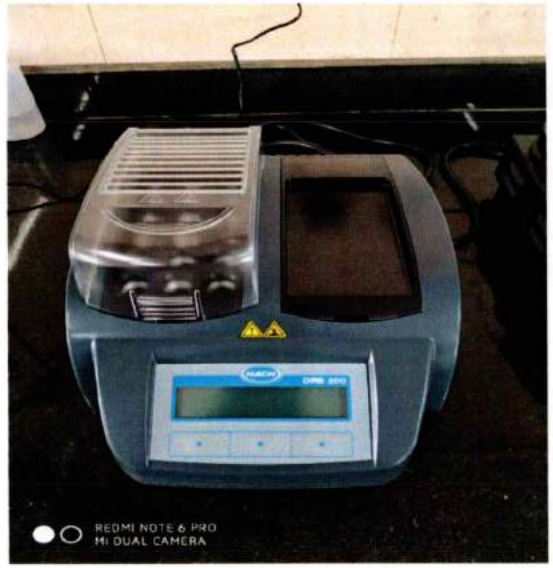



KDC-Aqua

# CETP Laboratory equipped with new instruments



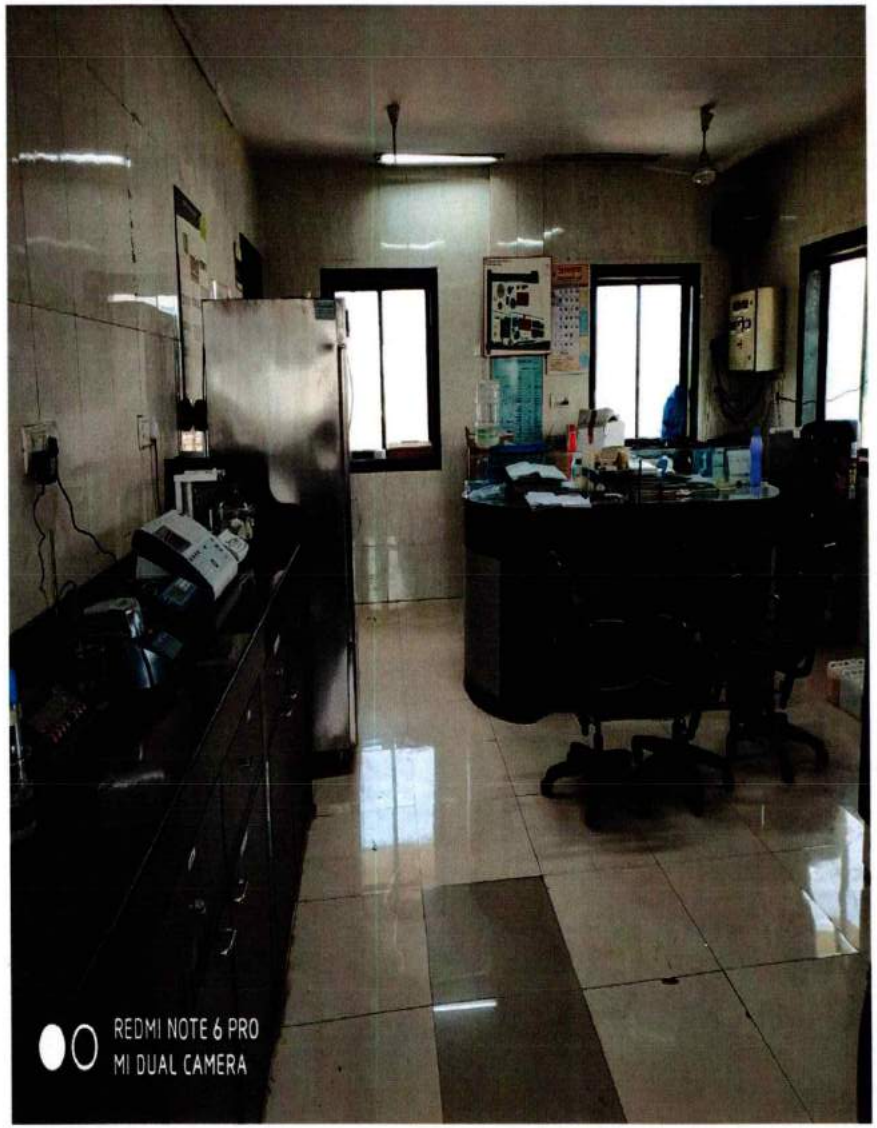



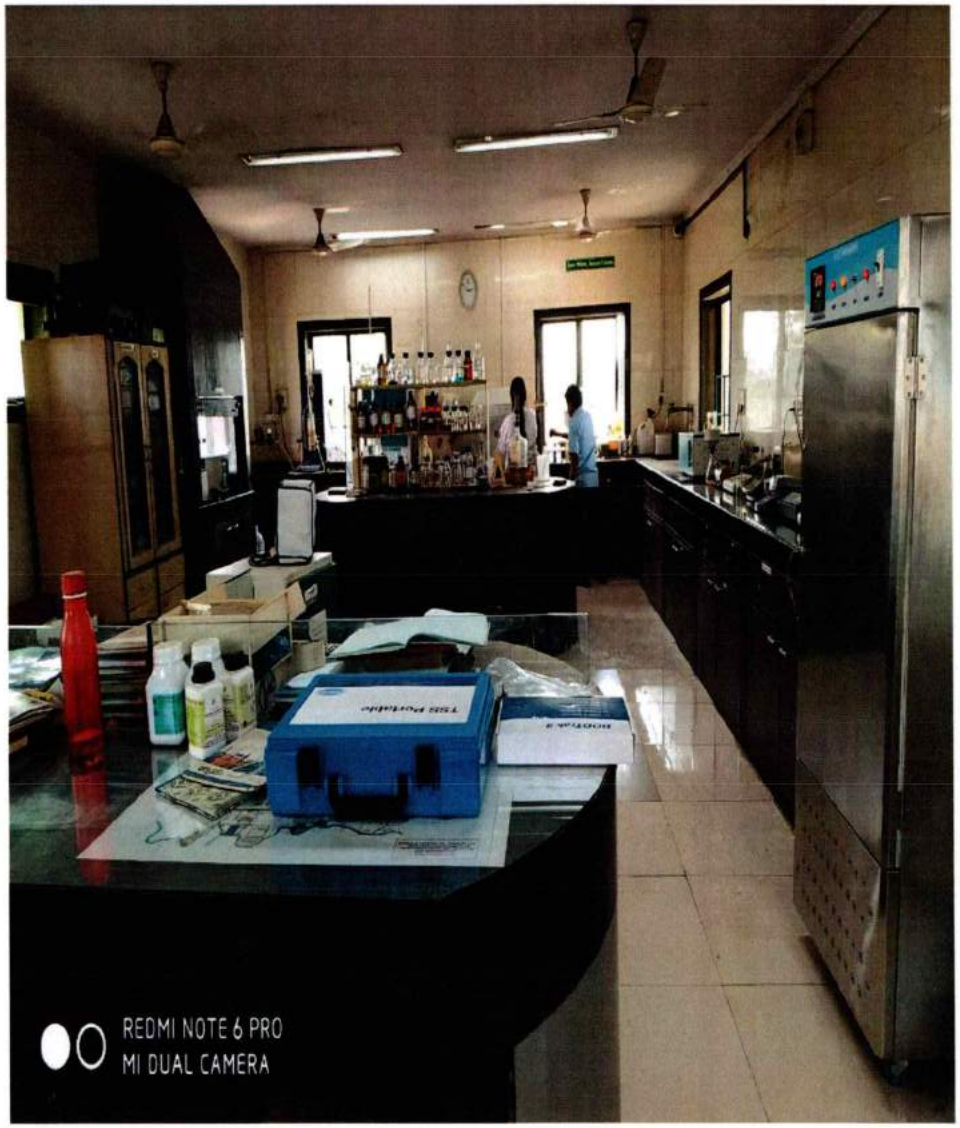






KDC-Aqua

# CETP Laboratory equipped with new instruments



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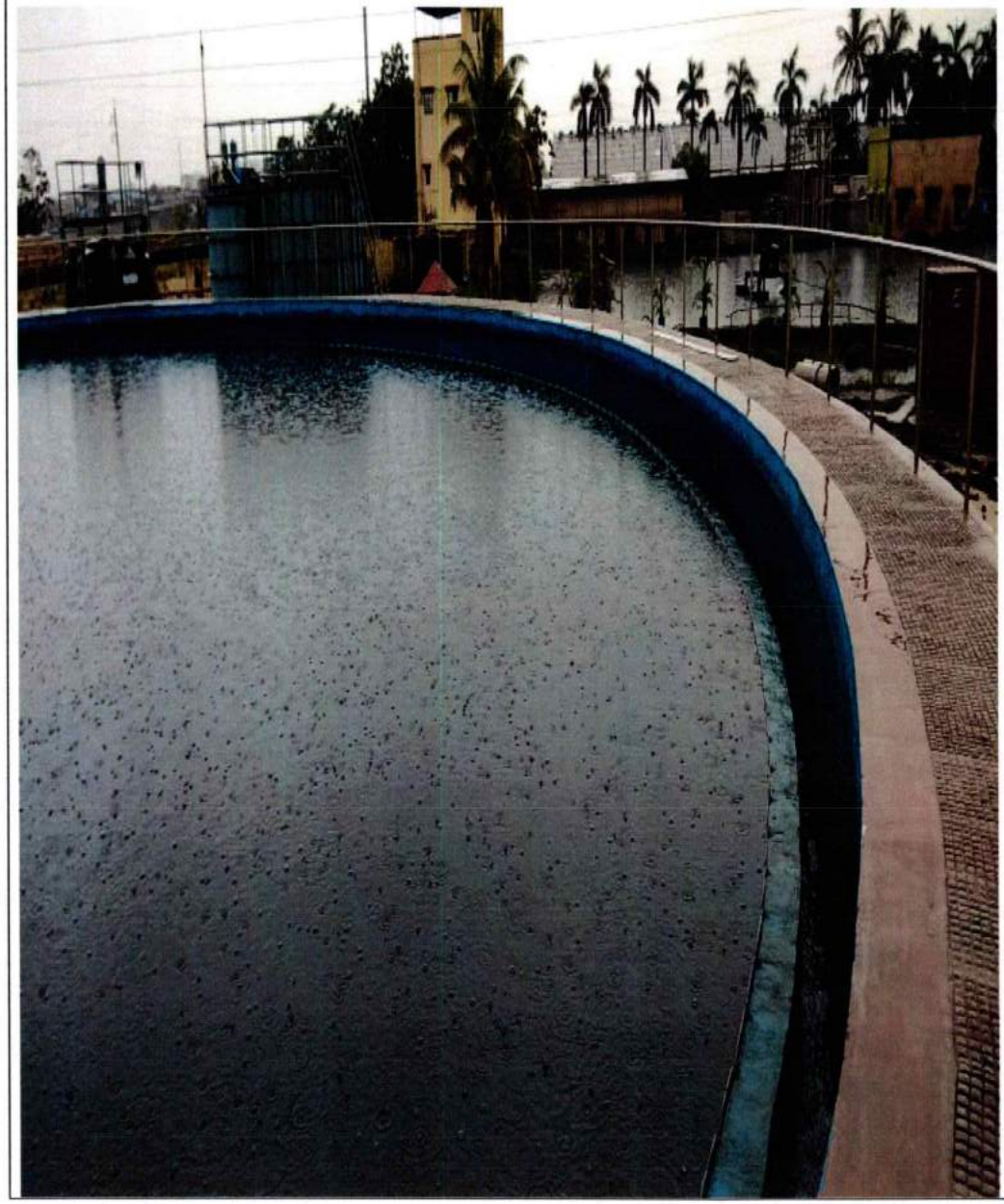
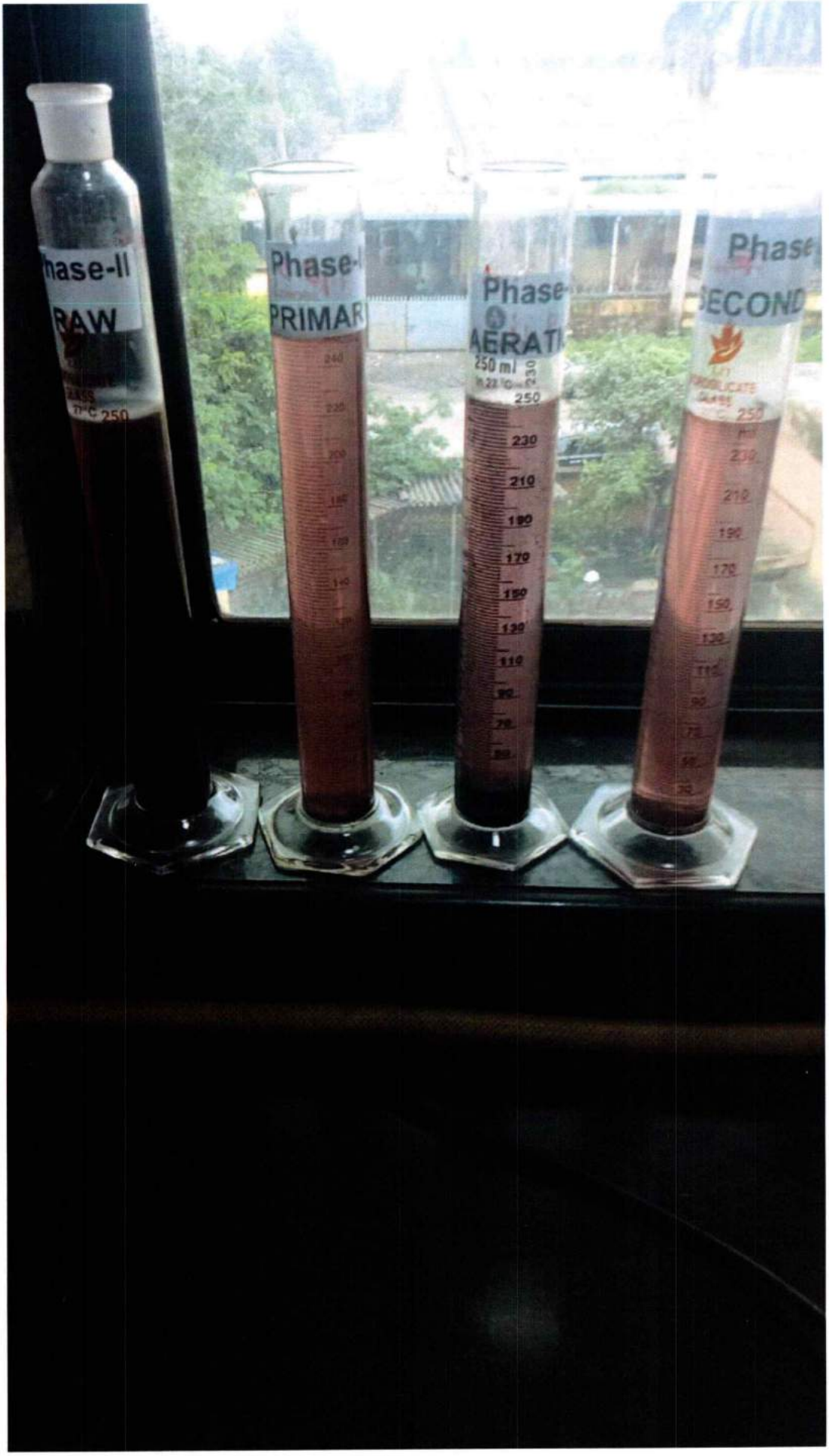
# Phase- II Secondary Clarifier overflow and Samples

Secondary Clarifier



1. Raw effluent
2. Primary treated Effluent
3. Secondary treated effluent

Annexure-4


hase-II
RAW
Phase-
PRIMAR
Phase
AERATI
250 ml
Phase
ECOND

KDC-Aqua

# Phase- II Various Samples

PHASE II PRIMARY CLARIFIER AFTER REHABILATION

PHASE II AERATION TANK AFTER REHABILATION


PHASE II SECONDARY CLARIFIER AFTER REHABILATION

PHASE II SLUDGE DRYING BEDS AFTER REHABILATION

KDC-Aqua

# Aeration Tank (Cap. 10125 cum)

**INITIAL STATUS**

**AFTER SLUDGE REMOVAL**


**After Rehabilitation Activity**

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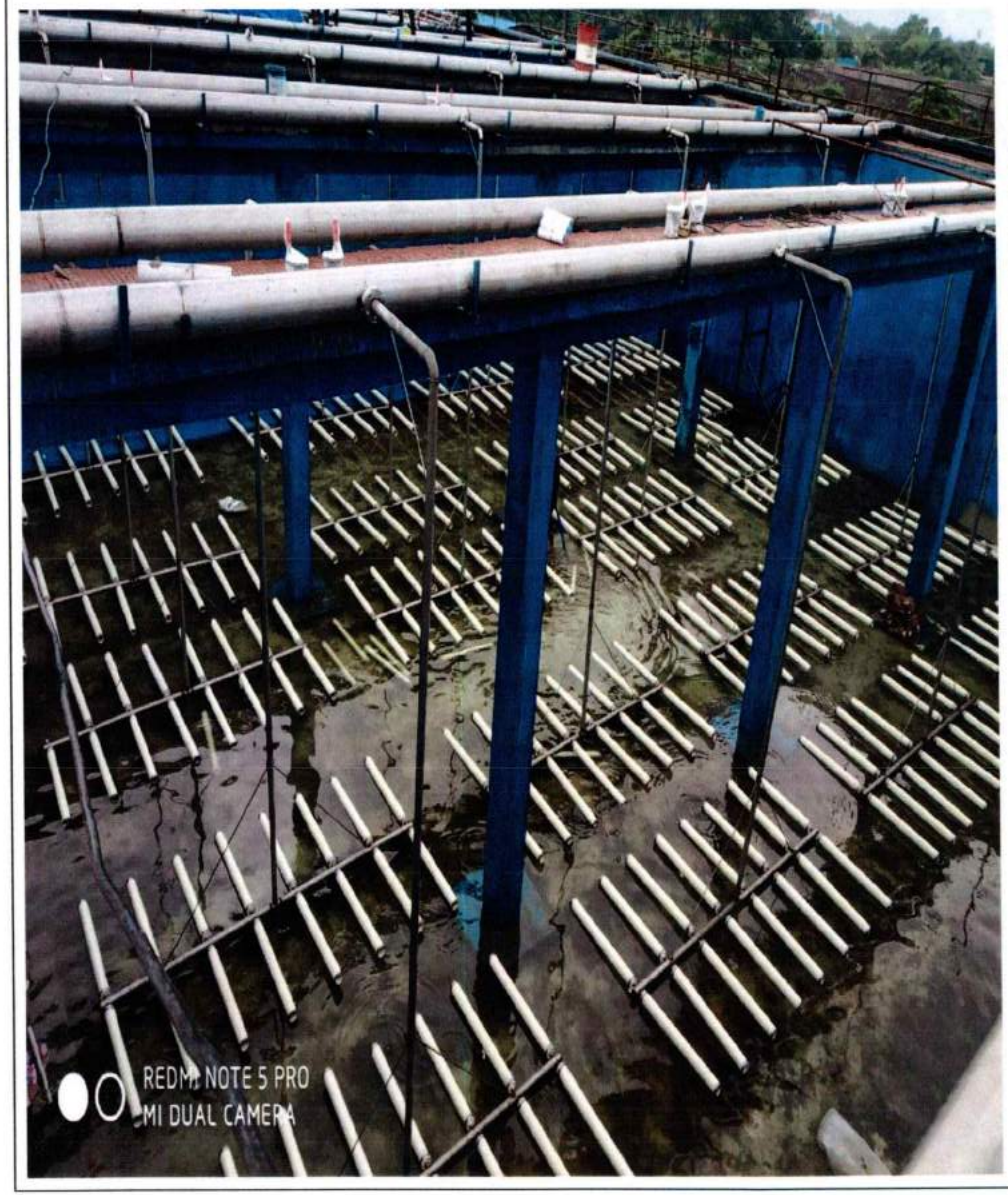
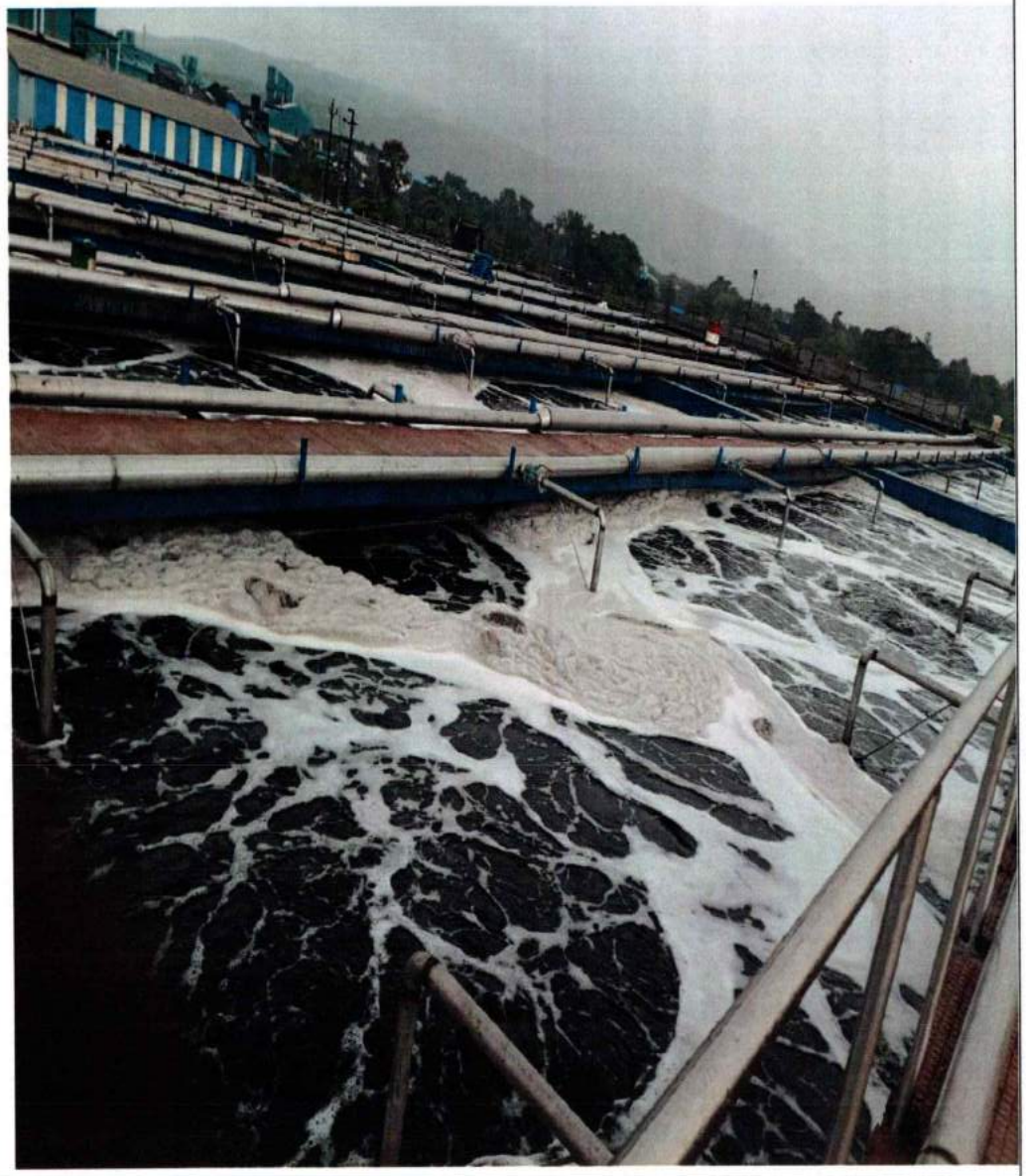
# Phase- II Aeration Tank diffused system



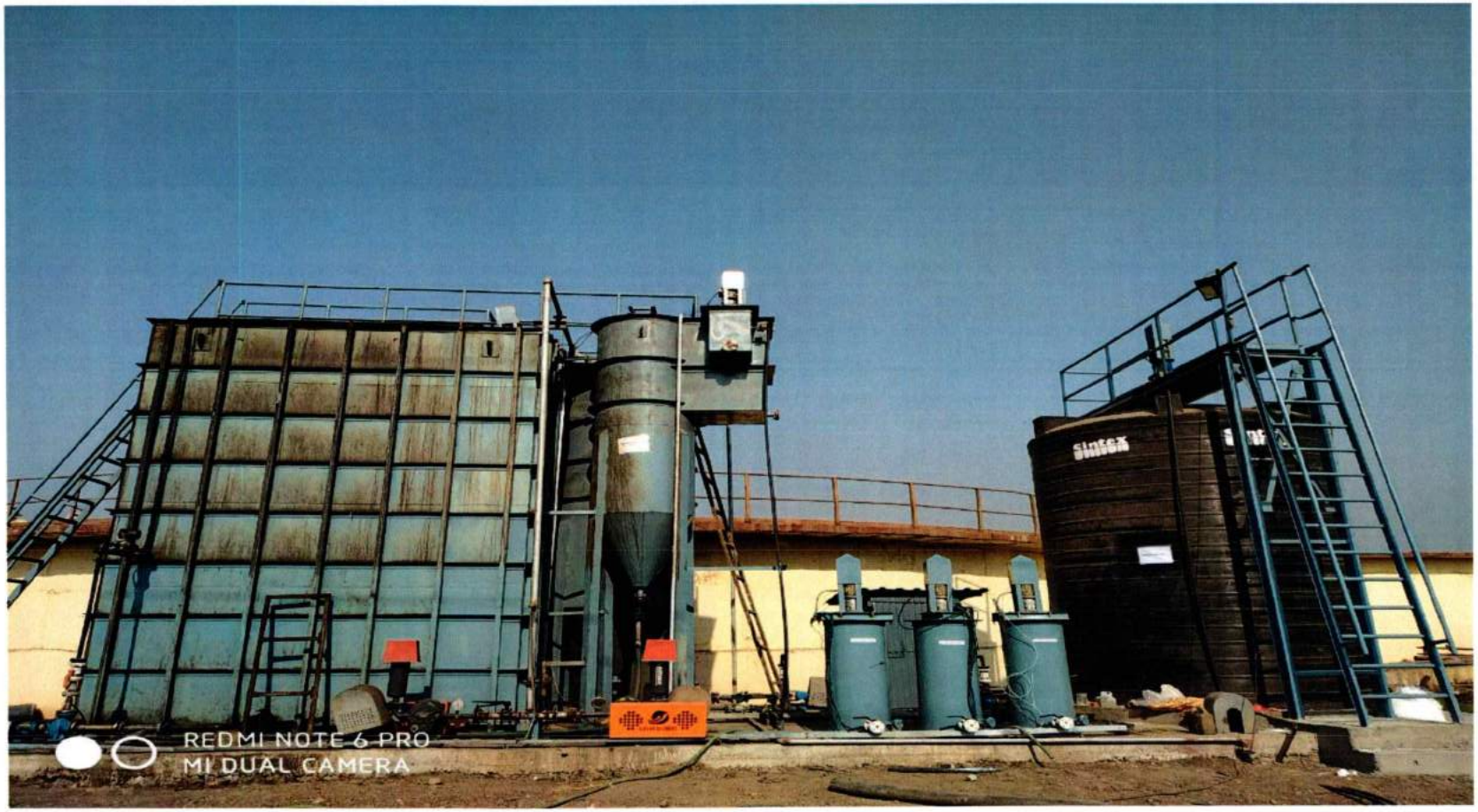



PHASE II COLLECTION TANK AFTER REHABILATION- 10 MLD


PHASE II EQUALISATION TANK AFTER REHABILATION

KDC-Aqua

# Pilot Plant




| Aeration Tank | | | | | Secondary Settling Tank | | |
|---|---|---|---|---|---|---|---|
| pH | DO (mg/lit) | SVI (%) | MLSS (mg/lit) | MLVSS (mg/lit) | pH | TSS (mg/lit) | COD (mg/lit) |
| 7.8 | 3 | 13 | 2680 | 1660 | 7.7 | 84 | 185 |

**Presently Treated water is being used for centrifuge washing**

KDC-Aqua

# Environment Awareness : Plantation of trees