

- 1) M/s. VTP and Mohite Associates (Urban Nest) has a residential and commercial construction project at Sr. No. 58/2/1 A + 58/2/2A, 58/2B, Undri, Tal- Haveli, Dist-Pune.
- 2) PP has obtained EC on 03.09.2021 for total plot area- 35300 sq.mt and total BUA- 77154.49 Sq.mt.
- 3) PP has obtained Consent to establish on 02.03.2016 for total plot area - 35300 sq.mt and total BUA- 78978.69 Sq.mt and applied for revalidation of consent to establish for total BUA- 77154.49 Sq.mt
- 4) PP has applied for consent to operate for total BUA- 69536.77 sq.mt.
- 5) During visit it observed that, PP has completed construction work of residential building A1, A2, A3, B1 and B2, completed construction work of commercial building C1, C2 and club house.
- 6) During visit representative of project proponent Shri. Uday Sutar informed that there is a 90% occupancy in residential buildings, in commercial building C1 – out of 84 shops only 22 no. of shops has occupied and in commercial building C2- out of 172 shops only 12 no. of shops occupied
- 7) PP has provided 1st STP of 250 CMD which comprises primary, secondary, tertiary treatment for residential building, during visit STP found in operation. Treated effluent is recycled for flushing and gardening. Collection cum neutralization and aeration

tanks are underground. Slight odour nuisance is observed near STP. PP has provided common exhaust vent pipe to neutralization tanks, aeration tank and setting tank. Exhaust of vent pipe is kept above terrace of residential building. JVS of STP outlet is collected for analysis purpose.

8) PP has provided 2nd STP of 135 CMD capacity adjacent to this STP, for commercial building C2. It is comprised of primary, secondary and tertiary treatment; same is not in operation till date as there is no generation of sufficient sewage load and whatever generated sewage is transferred to another STP of 50 CMD capacity for further treatment.

9) PP has provided 3rd STP of 50 CMD capacity for commercial building C2 and located near C2 building. It is comprised of primary, secondary and tertiary treatment during visit STP found in operation. Treated effluent is recycled for flushing and gardening. JVS of STP outlet is collected for analysis purpose.

10) STP of 250 CMD is located approx. 14.71 mt away, STP of 135 CMD is located approx. 8.04 mt away and STP of 50 CMD is located approx. 192.4 mt away from the residence of applicant. The distance between STP of 250 CMD and STP of 135 CMD is approx. 20.66 mt.

11) PP has provided two no. of OWC's of capacity 400 kg/day and 250 kg/day capacity, OWC of 400 kg/day capacity is found in operation as per wet solid waste load.

Copy of the visit report is attached and enclosed herewith as an Annexure-I.

Google image of the project and applicant's residence is as below,



The M.P.C. Board Officials carried out noise monitoring within the project site in question and near applicant's residence on 22/11/2022. The detailed noise monitoring report is as below,

Noise monitoring report:-

Sr. No.	location	Date	Time	Noise Limits in dB(A) Leq day time for Residential area	Noise meter reading in dB(A) Leq
Within Project Site					
1	Near collection tank	22-11-2022	14:10	55	52.89
2	Near Blower room of STP	22-11-2022	14:15	55	72.11
3	Near Aeration tank	22-11-2022	14:20	55	62.16
Near Residence of Applicant					
4	Near front gate of applicant's residence	22-11-2022	14:27	55	52.42
5	At 5 mt away from STP	22-11-2022	14:32	55	52.84
6	Outside compound wall of STP	22-11-2022	14:37	55	53.07

From the Noise monitoring reports dated 22/11/2022, it can be stated that the noise levels within the project site in question is exceeding the limits near Blower room of STP and near Aeration tank and found within the limit at applicant's residence as per The Noise Pollution (Regulation and Control) Rules, 2000 (rule 3(1) and 4(1) residential area daytime (6.00 a.m. to 10.00 p.m.) limit- 55 dB(A) Leq.

As per the interim direction issued by MPCB dated 30/03/2022, PP has appointed an expert Government Educational Institute i.e. COEP Technological University, Pune to study and suggestion of technical & remedial measures so as to minimize the odour and noise pollution from STP. Accordingly, COEP Technological University, Pune has given second interim report for STP adequacy for said project vide letter dated 17/10/2022 and mentioned progress about the recommended remedial measures. Copy of the second Interim Report of COEP is enclosed herewith as an **Annexure-II**. However, during visit dated 22/11/2022, following observations are made as per the COEP recommended remedial measures,

- 1) PP has provided one working and one standby sewage transfer pump to maintain sewage treatment.
- 2) The anoxic tank is provided with gentle agitation.
- 3) Provided fine bubble diffuser to ensure effective aeration in aeration tank.
- 4) PP has provided acoustic enclosure to two no. of blowers. Room is partially covered with foam sheets and pumps were provided with covers.
- 5) Installed Tube Settler Media in the secondary settling tank.
- 6) Provided a pump with 12 m³/hr at 20 m Head and provided recycle line in the filter feed tank.
- 7) Installed new sand filter and carbon filter in parallel operation.
- 8) Provided a control panel with an automatic operation mode.
- 9) Chlorinator is found in operation.
- 10) Ozonator is found in operation.

- 11) A terminal manhole for collecting samples and measuring flow at the end of the collection system is provided.
- 12) Flow meters are provided at inlet of the Sewage treatment plant and at outlet of sewage treatment plant.
- 13) Provided proper covers to all inspection chambers.
- 14) Provided proper noise insulating covers for pumps.
- 15) Maintained cleanliness in the sewage treatment plant area.
- 16) PP has informed that, for scientific operation of STP training is provided to sewage plant operators.
- 17) For acoustic treatment of Air blower rooms, PP has provided acoustic enclosure to blower. Room is partially covered with foam sheets and pumps were provided with covers.
- 18) Bio culture is added in equalization tank to avoid odour nuisance to the surrounding area.
- 19) Provision for sludge collection and disposal of sludge collected from bar screen and secondary settling tank is in process.

Again COEP has given Third Interim report for STP adequacy for said project vide letter dated 25/11/2022 and mentioned progress about the recommended remedial measures, copy of the Third Interim Report of COEP is enclosed herewith as an **Annexure-III**, which are same as above.

During second visit, it's observed that, PP has provided metallic acoustic enclosure with internal acoustic foam panel to Blower.

As per orally request of the Applicant again noise monitoring is carried out on 29/11/2022.

Noise monitoring report:-

Sr. No.	location	Date	Time	Noise Limits in dB(A) Leq day time for Residential area	Noise meter reading in dB(A) Leq
Within Project Site					
1	Near collection tank	29-11-2022	9:56	55	51.1
2	Near Blower room of STP	29-11-2022	10:02	55	52
3	Near Aeration tank	29-11-2022	10:07	55	51
Near Residence of Applicant					
4	Near front gate of applicant's residence	29-11-2022	8:54	55	49.4
5	At 5 mt away from STP	29-11-2022	9:32	55	49.3
6	Outside compound wall of STP	29-11-2022	9:38	55	49.7

From the Noise monitoring reports dated 29/11/2022, it can be stated that the noise levels within the project site in question and near applicant's residence is found within the limit as per The Noise Pollution (Regulation and Control) Rules, 2000 (rule 3(1) and 4(1) residential area daytime (6.00 a.m. to 10.00 p.m.) limit- 55 dB(A) Leq.



(Pratap Jagtap)
Sub Regional Officer,
M.P.C. Board, Pune-1

Date:- 02/12/2022

Place :- Pune.

**MAHARASHTRA POLLUTION CONTROL BOARD
SUB-REGIONAL OFFICE – PUNE-I**



Ph. 020-25811694
Fax. 020-25811029

Jog Center Bldg.
2rd floor, Wakdewadi,
Old Mumbai – Pune Highway,
Pune 411003

Visit Report

Name & Address of Project :- M/s VTP & Mohite Associate “Urban Nest”
Sr. No. 58/2/1 A + 58/2/2A, 58/2B, Undri,
Tal- Haveli, Dist- Pune

Date of Visit :- 22.11.2022

Industry Officials :- Shri. Uday Sutar

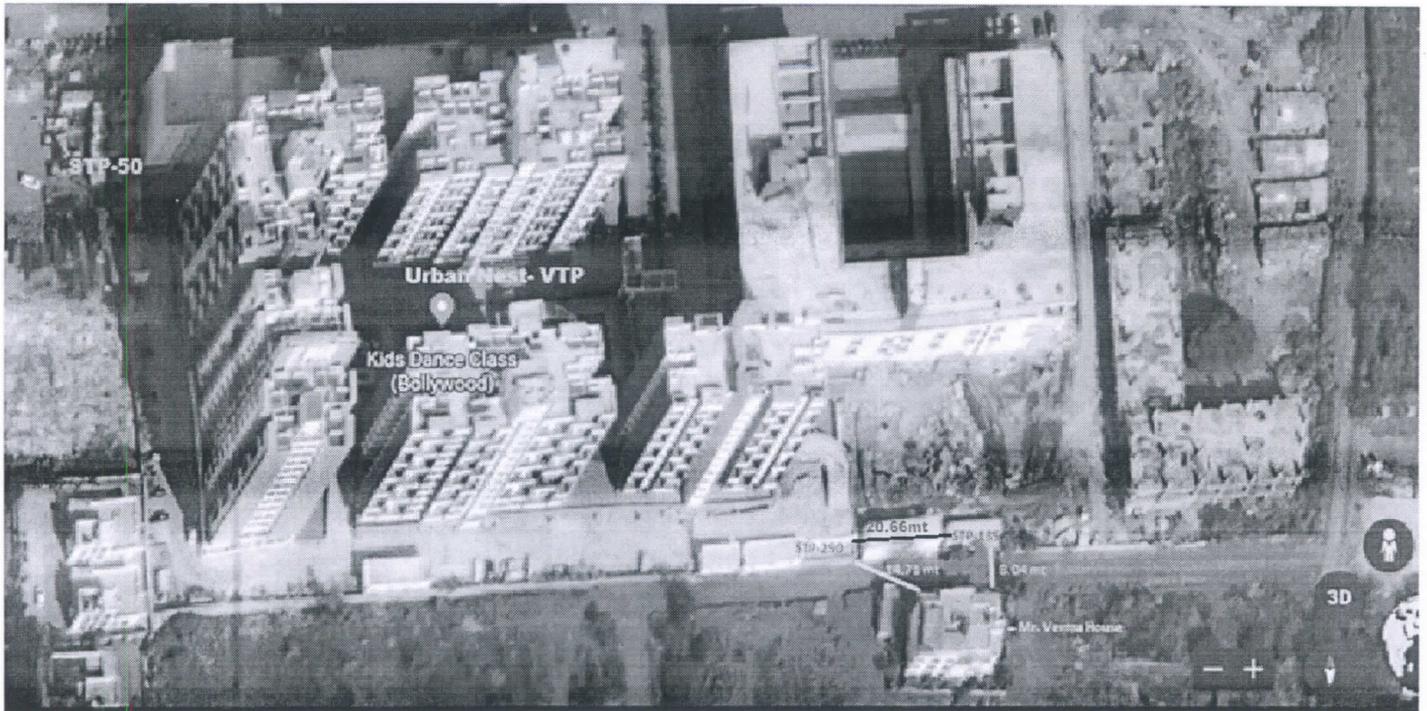
Observations :-

Visit is carried out as per the order passed by Hon’ble NGT dated 01/11/2022 in the matter of OA No. 76 of 2021 and order dated 15.11.2022 in the matter of OA No. 92 of 2022, During visit following observations are made,

- 1) M/s. VTP and Mohite Associates (Urban Nest) has a residential and commercial construction project at Sr. No. 58/2/1 A + 58/2/2A, 58/2B, Undri, Tal- Haveli, Dist-Pune.
- 2) PP has obtained EC on 03.09.2021 for total plot area- 35300 sq.mt and total BUA- 77154.49 Sq.mt.
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- 7) PP has provided one STP of 250 CMD which comprises primary, secondary, tertiary treatment for residential building, during visit STP found in operation. Treated effluent is recycled for flushing and gardening. Collection cum neutralization and aeration tanks are underground. Slight odour nuisance is observed near STP. PP has provided common exhaust vent pipe to neutralization tanks, aeration tank and setting tank. Exhaust of vent pipe is kept above terrace of residential building. JVS of STP outlet is collected for analysis purpose.
- 8) PP has provided 2nd STP of 135 CMD capacity adjacent to this STP, for commercial building C2. It is comprised of primary, secondary and tertiary treatment; same is not in operation till date as there is no generation of sufficient sewage load and whatever generated sewage is transferred to another STP of 50 CMD capacity for further treatment.
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- 10) STP of 250 CMD is located approx. 14.71 mt away, STP of 135 CMD is located approx. 8.04 mt away and STP of 50 CMD is located approx. 192.4 mt away from complaint i.e Shri. Varma house. The distance between STP of 250 CMD and STP of 135 CMD is approx. 20.66 mt.
- 11) PP has provided two no. of OWC's of capacity 400 kg/day and 250 kg/day capacity, OWC of 400 kg/day capacity is found in operation as per wet solid waste load.

Google image of the project is as below,



Noise monitoring report:-

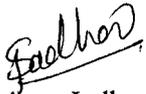
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6	Outside compound wall of STP	22-11-2022	14:37	55	53.07

As per the interim direction dated 30/03/2022, PP has appointed an expert Government Educational Institute i.e. COEP Technological University, Pune to study and suggestion of technical & remedial measures so as to minimize the odor and noise pollution from STP. Accordingly, COEP Technological University, Pune has given second interim report for STP adequacy for said project vide letter dated 17/10/2022 and mentioned progress about the recommended remedial measures. However during visit, following observations are made as per the COEP recommended remedial measures,

- 1) PP has provided one working and one standby sewage transfer pump to maintain sewage treatment.
- 2) The anoxic tank is provided with gentle agitation.
- 3) Provided fine bubble diffuser to ensure effective aeration in aeration tank.
- 4) PP has provided acoustic hood to two no. of blowers. Room is partially covered with foam sheets and pumps were provided with covers.
- 5) Installed Tube Settler Media in the secondary settling tank.
- 6) Provided a pump with 12 m³/hr at 20 m Head and provided recycle line in the filter feed tank.
- 7) Installed new sand filter and carbon filter in parallel operation.
- 8) Provided a control panel with an automatic operation mode.
- 9) Chlorinator is found in operation.
- 10) Ozonator is found in operation.
- 11) A terminal manhole for collecting samples and measuring flow at the end of the collection system is provided.
- 12) Flow meters are provided at inlet of the Sewage treatment plant and at outlet of sewage treatment plant.
- 13) Provided proper covers to all inspection chambers.
- 14) Provided proper noise insulating covers for pumps.
- 15) Maintained cleanliness in the sewage treatment plant area.

- 16) PP has informed that, for scientific operation of STP training is provided to sewage plant operators.
- 17) For acoustic treatment of Air blower rooms, PP has provided acoustic enclosure to blower. Room is partially covered with foam sheets and pumps were provided with covers.
- 18) Bio culture is added in equalization tank to avoid odour nuisance to the surrounding area.
- 19) Provision for sludge collection and disposal of sludge collected from bar screen and secondary settling tank is in process.

PP has informed that COEP will visit in next 3- 4 days for further verification and submission of final interim report as per the recommendation to control noise and odour.

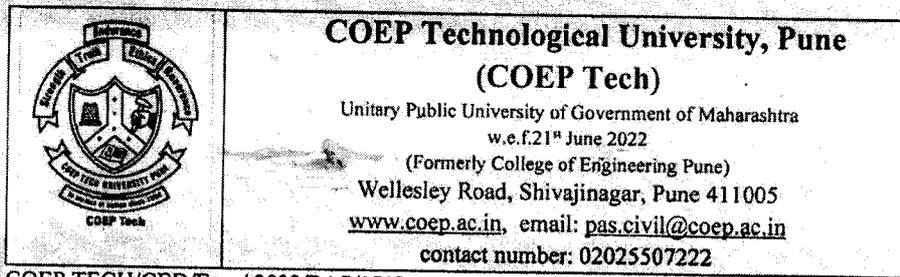


(Sanjana Jadhav)
Field Officer,
M.P.C. Board, Pune-1



(Pratap Jagtap)
Sub Regional Officer,
M.P.C. Board, Pune-1

Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022



COEP TECH/CED/Env./ 2022/PAS/1712

Date : 17/10/2022

To,
NSafe Technologies LLP,
C-2/14, Rahul Park, Shikshak Nagar, Kothrud Pune – 411 038

Sub: Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri,
Pune

- Ref: 1. Your Letter dated 18.05.2022
2. Our letter no. COEP/Civil/Env.-PAS/2022/942 dated 15.06.2022
3. Work order no. STP/22-23/29 dated 05.07.2022
3. Payment receipt dated 12.07.2022
4. letter no. COEP TECH/CED/Env./ 2022/PAS/1331 dated 10/08/2022

R/Sir,

As per reference letter no. 4, I have sent an Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune. It is mentioned to kindly send a report after implementation of recommended remedial measures within 45 days after receipt of this first interim report and next visit for the final adequacy report will be scheduled within eight days after receipt of communication about the implementation of remedial measures. But I have not received any implementation report so I have visited site on 17.10.2022 to verify implementation of recommendation. I am sending Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune for necessary action.

Kindly send a report after implementation of recommended remedial measures after receipt of this second interim report and next visit for the final adequacy report will be scheduled within eight days after receipt of communication about the implementation of remedial measures. After the visit, the final adequacy report will be submitted to NSafe Technologies LLP, C-2/14, Rahul Park, Shikshak Nagar, Kothrud, Pune within the next eight days.

Thanking you,



1/10

Parag Sadgir
Dr Parag Sadgir

Professor in Civil Engineering Department

COEP Technological University, Pune

Dr. Parag Sadgir

Professor in Civil Engineering Department

COEP Technological University Pune

A Unitary Public University of Government of Maharashtra
(Formerly College of Engineering Pune)

Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022

(Formerly College of Engineering Pune)

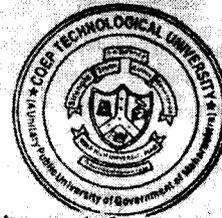
Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune

Introduction:

As per letter of NSafe Technologies LLP, C-2/14, Rahul Park, Shikshak Nagar, Kothrud Pune - 411 038 dated 18.05.2022. After discussion, quotation about adequacy report was communicated as per letter no.COEP/Env.-PAS/2022/942 dated 15.06.2022. Then NSafe Technologies LLP, Pune sent a Work order dated 05.07.2022 with payment receipt dated 12.07.2022 for work of Adequacy Report of Sewage Treatment Plant at site VTP Urban Nest, Undri, Pune. After study of design details submitted by NSafe Technologies LLP, Pune and site visit on 21st July 2022, detailed Situational Analysis of Sewage treatment Plant Adequacy for VTP Urban Nest, S. no. 58/2/1A, 58/2/2A, 58/2B, Undri, Pune site was carried out. Remedial measures for Sewage Treatment Plant process and operational improvements are recommended by letter no. COEP TECH/CED/Env./ 2022/PAS/1331 dated 10/08/2022 to minimize odour and noise immediately and it is mentioned to send a report after implementing recommended remedial measures within 45 days after receipt of the interim report so that next visit for the final adequacy report will be scheduled within eight days. Due to non-receipt of the report and to assess the implementation of recommended remedial measures, second site visit was conducted on 17.10.2022.

Scope of work

1. To prepare plant adequacy report.
2. To provide inadequacy of the plant, if any.
3. To suggest the scheme to make the plant adequate if inadequacy is found.
4. To prepare a final adequacy report for the plant for designed capacity and parameters.



Project description:

As per the information given by NSafe Technologies LLP, Pune, VTP Urban Nest, Undri, Pune project is situated at S. no. 58/2/1A, 58/2/2A, 58/2B at village Undri, Pune in Pune Municipal Corporation area. (Latitude from 18° 26' 57" to 18° 26' 56" longitude From : Degree:73°

54°49" To : Degree:73°; Minutes : 54, Seconds :42). Plot area is 35300 sq.m. and total built

2/10

Dr. Parag Sadgir

Professor in Civil Engineering Department
COEP Technological University, Pune
A Unitary Public University of Government of Maharashtra

Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022

up area is 78978.69 sq.m. The sewage Treatment Plant is designed for 250 KLD. The site is a residential complex. As per the information given by NSafe Technologies LLP, Pune, in the residential complex of VTP Urban Nest project, the number of tenements 366 with a population 1830 are connected to this Sewage treatment plant. Considering daily water consumption 135 LPCD, total water consumption is around 247.050 m³/d for domestic use and sewage generation considered 100% is around 247.05 m³/d. The sewage treatment plant is designed for a capacity 250 m³ per day.

Observations :

This Sewage treatment plant Adequacy Report is based on the visit to

1. Sewage treatment plant,
2. Available Technical details of Sewage treatment plant,
3. Detailed discussions with concerned personnel of Sewage treatment plant.

Units in Sewage treatment plant

Unit Operations:

Unit Operations include:

1. Collection tank
2. Bar screen chamber
3. Oil and Grease chamber ,
4. Equalization tank,
5. Anoxic tank,
6. MBBR Tank
7. Settling tank,
8. Filter feed tank
9. Tertiary treatment with Pressure Sand Filtration followed by Activated Carbon Adsorption
10. Ozonation
11. Treated water tank

Recommendations based on available data and field observations:

After the site visit and study of documents provided by of NSafe Technologies LLP, Pune and collection and analysis of sewage samples at various locations of the Sewage treatment plant, it was observed that the noise level was reduced than previous visit but not satisfying day limits as per The Noise Pollution (Regulation and Control) Rules, 2000 (rule 3(1) and 4(1) residential area daytime(6.00 a.m. to 10.00 p.m.) 55 dB(A) Leq and outlet sewage quality is improved but

3/10

Dr. Parag Sador
 Professor in Civil Engineering Department
 COEP Technological University Pune
 A Unitary Public University of Government of Maharashtra



Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022

needs detail testing and analysis of required parameters, which can be conducted after implementation of all recommended remedial measures to comment about satisfying or not satisfying required norms as per MPCB rules. So progress about recommended remedial measures to minimize odour and noise and to achieve the required outlet treated sewage quality are observed and reported in detail as below;

1. Raw sewage collection Tank

Observation

As per information provided and observations, for the raw sewage collection Tank, one number 5 H.P. sewage transfer pump is provided, which is of higher capacity causing less retention time in the secondary treatment system

Recommendation:

It is recommended to provide one working and one standby sewage transfer pump of 12m³/hour at 10 m head for improvement in flow. It is recommended to provide recycle line in the collection tank so that flow will be regulated and the F/M ratio will be maintained for improvement in sewage treatment.

Implementation observed during second visit dated 17.10.2022

Implemented

2. Anoxic Tank

Observation

As per the information provided and observations, the Anoxic Tank is not operational as per process philosophy.

Recommendation:

It is recommended to recommission the anoxic tank with gentle agitation.

Implementation observed during second visit dated 17.10.2022

Not implemented

3. Aeration Tank

Observation

As per the information provided and observations, coarse bubble diffusion is provided in the aeration tank. This is not providing effective oxygen transfer and results in not achieving desired process efficiency.

Recommendation:

It is recommended to provide aeration through a fine bubble diffuser to ensure effective oxygen transfer, thus improving process efficiency.

Implementation observed during second visit dated 17.10.2022

4/10



Dr. Parag Sadgir

Professor in Civil Engineering Department
COEP Technological University Pune
Unitary Public University of Government of Maharashtra
(Formerly College of Engineering Pune)

Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022

Implemented.

4. Air Blower

Observation

Air blower pressure is higher than the designed pressure, resulting in more noise levels. It is difficult to measure air distribution quantification. It is observed that the Noise level is high for the day and night limits as per The Noise Pollution (Regulation and Control) Rules, 2000 (rule 3(1) and 4(1) residential area daytime(6.00 a.m. to 10.00 p.m.) 55 dB(A) Leq and 45 dB (A) Leq (Night time 10.00 p.m. to 6.00 a.m.))

Recommendation:

It is recommended to provide Acoustic Hood to reduce the blower noise level to the compliance norms as per The Noise Pollution (Regulation and Control) Rules, 2000 (rule 3(1) and 4(1) residential area daytime(6.00 a.m. to 10.00 p.m.) 55 dB(A) Leq and 45 dB (A) Leq (Night time 10.00 p.m. to 6.00 a.m.).

Implementation observed during second visit dated 17.10.2022

Not implemented. Room is partially covered with foam sheets and pumps were provided covers.

5. Secondary Settling Tank

Observation

As per information provided and observations, Tube Settler media is absent in the secondary settling tank.

Recommendation:

It is recommended to install Tube Settler Media in the secondary settling tank for improvement in clarification due to the increase in the upward velocity flow rate of treated sewage.

Reduction in Suspended solids in the secondary settling tank outlet will improve filter efficiency and quality.

Implementation observed during second visit dated 17.10.2022

Implemented.

6. Filter Feed Pump

Observation

As per information provided and observations, a filter feed pump is provided for 25 m³/hr @ 20 m head with one working and one standby pump.

Recommendation:



Dr. Parag Sadgir

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COEP Technological University Pune
A Unitary Public University of Government of Maharashtra
(Formerly College of Engineering Pune)

Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022

It is recommended to provide a pump with 12 m³/hr at 20 m Head and provide recycle line in the filter feed tank to regulate flow.

Implementation observed during second visit dated 17.10.2022

Implemented

7. Pressure Sand Filter and Activated Carbon Filter

Observation

As per the information provided and observations, Filter capacity does not match with pump and plant capacity and capacity of filters area is very low for 12 m³/hr feed flow.

Recommendation:

It is recommended to Install new filters of 12 m³/hr capacity in parallel operation.

Implementation observed during second visit dated 17.10.2022

Implemented

8. Control Panel

Observation

As per the information provided and observations, control panel automation is not operational.

Recommendation:

It is recommended to provide a control panel with an automatic operation mode following all process logic.

Implementation observed during second visit dated 17.10.2022

Implemented.

9. Chlorination

Observation

As per the information provided and observations, the chlorine dosing pump is not operational.

Implementation observed during second visit dated 17.10.2022

Implemented

10. Ozonator

Observation

As per the information provided and observations, Ozonator is not operational.

Recommendation:

It is recommended for Repair and recommissioning of Ozonator.

Implementation observed during second visit dated 17.10.2022



Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022

Not implemented.

11. A terminal manhole for collecting samples and measuring flow at the end of the collection system is recommended.

Implementation observed during second visit dated 17.10.2022

Not implemented.

12. For measurement of inlet sewage flow of the Sewage treatment plant, an electromagnetic flow meter is recommended.

Implementation observed during second visit dated 17.10.2022

Not implemented.

13. At the sewage treatment plant outlet, a turbine-type flow meter for flow measurement is recommended.

Implementation observed during second visit dated 17.10.2022

Not implemented.

14. It is recommended to provide proper covers to all inspection chambers.

Implementation observed during second visit dated 17.10.2022

Implemented.

15. It is recommended to provide proper noise insulating covers for pumps.

Implementation observed during second visit dated 17.10.2022

Implemented.

16. It is recommended to maintain cleanliness in the sewage treatment plant area.

Implementation observed during second visit dated 17.10.2022

Implemented.

17. It is recommended to provide skilled sewage plant operators with knowledge of the operation and maintenance of sewage treatment plants for smooth functioning.

Implementation observed during second visit dated 17.10.2022

Not implemented.

18. It is recommended to provide acoustic treatment for the Air blower rooms to reduce noise levels within prescribed noise levels.

Implementation observed during second visit dated 17.10.2022

Not implemented.

19. It is recommended to provide deodourising measures to avoid odour nuisance to the surrounding area.

Implementation observed during second visit dated 17.10.2022

Not implemented.

7/10

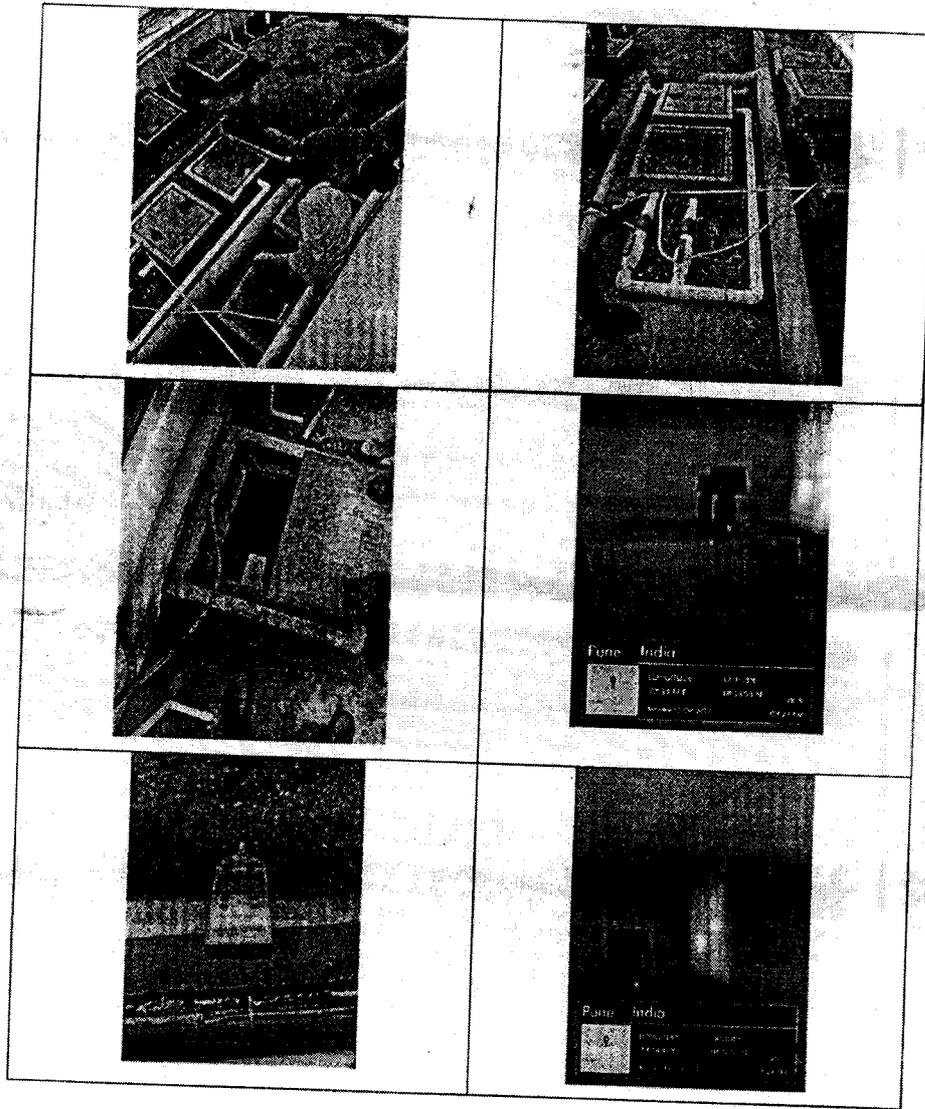


Parag Sadgir
17/10/2022

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(College of Engineering Pune)

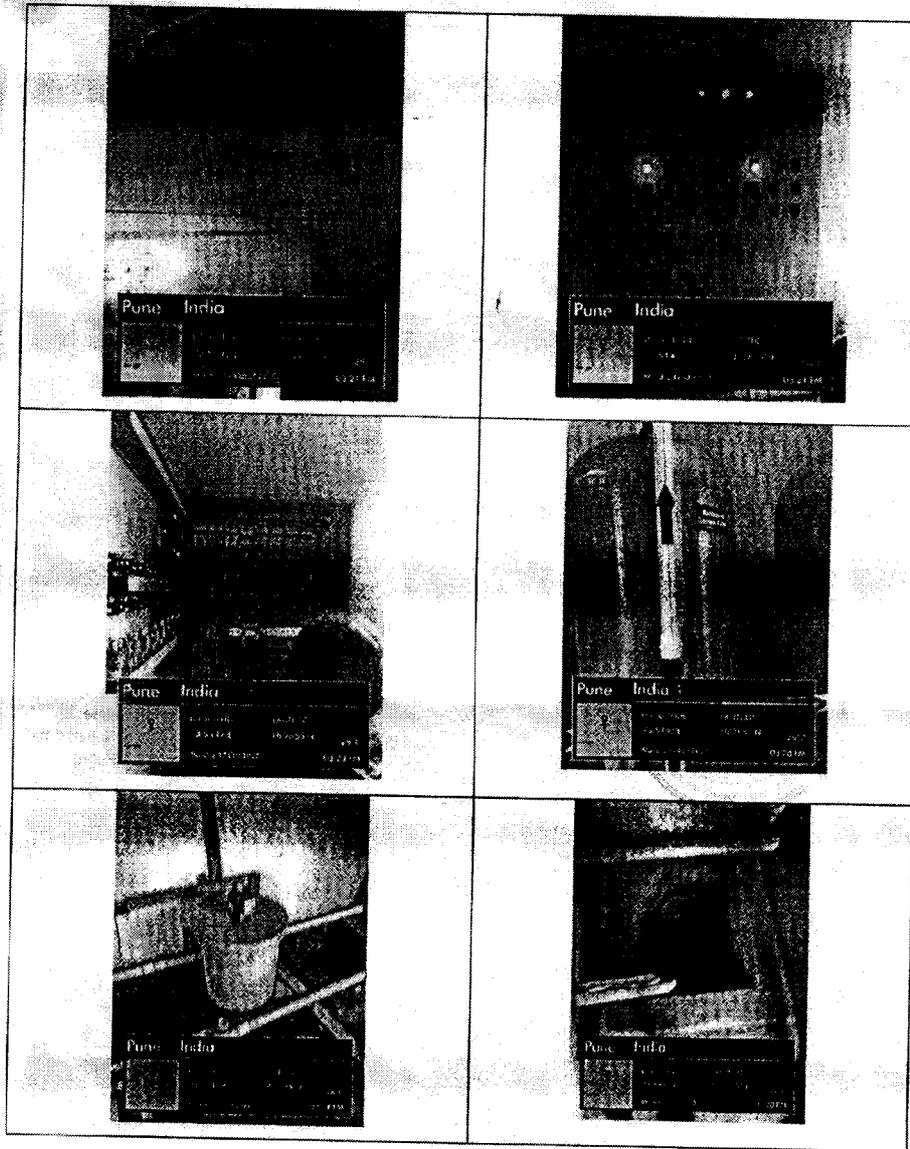
Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022

20. It is recommended for appropriate provision for sludge collection and disposal of sludge collected from bar screen and secondary settling tank.



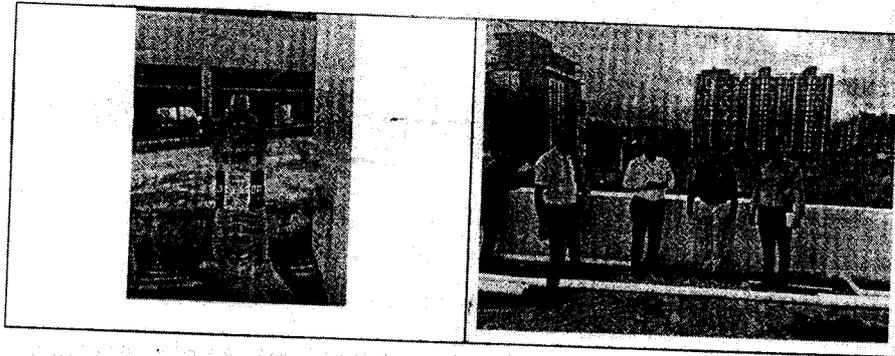
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Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022



Sadg
17/10/2022
Dr. Parag Sadgir
Professor in Civil Engineering Department
COEP Technological University Pune
A Unitary Public University of Government of Maharashtra
(Formerly College of Engineering Pune)

Second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 17.10.2022



Kindly send a report after implementing recommended remedial measures after receipt of the second interim report. The next visit for the final adequacy report will be scheduled within eight days. After the visit, the final adequacy report will be submitted to NSafe Technologies LLP, C-2/14, Rahul Park, Shikshak Nagar, Kothrud, Pune within the next eight days.

Dr Parag Sadgir
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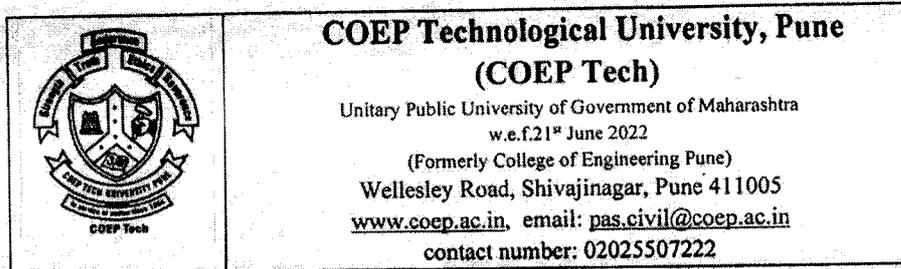
Professor in Civil Engineering Department
COEP Technological University, Pune (COEP Tech)
(Formerly College of Engineering Pune)

Dr. Parag Sadgir

Professor in Civil Engineering Department
COEP Technological University Pune
A Unitary Public University of Government of Maharashtra
(Formerly College of Engineering Pune)



Third Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 25.11.2022



COEP TECH/CED/Env./ 2022/PAS/1899

Date : 25/11/2022

To,
NSafe Technologies LLP,
C-2/14, Rahul Park, Shikshak Nagar, Kothrud Pune – 411 038

Sub: Third Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri,
Pune

- Ref: 1. Your Letter dated 18.05.2022
2. Our letter no. COEP/Civil/Env.-PAS/2022/942 dated 15.06.2022
3. Work order no. STP/22-23/29 dated 05.07.2022
3. Payment receipt dated 12.07.2022
4. letter no. COEP TECH/CED/Env./ 2022/PAS/1331 dated 10/08/2022
5. letter no. COEP TECH/CED/Env./ 2022/PAS/1712 dated 17/10/2022

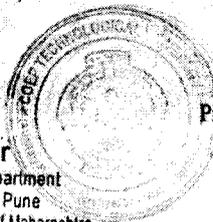
R/Sir,

As per reference letter no.4, I have sent an Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune. It is mentioned to kindly send a report after implementation of recommended remedial measures within 45 days after receipt of this first interim report and next visit for the final adequacy report will be scheduled within eight days after receipt of communication about the implementation of remedial measures. Then I have visited site on 17.10.2022 to verify implementation of recommendation. I have sent second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune. As per your mail dated 24.10.2022, compliance of all recommendations is completed. So Third site visit is conducted on 25.11.2022.

The next visit for the final adequacy report will be scheduled for process evaluation. After the visit, the final adequacy report will be submitted to NSafe Technologies LLP, C-2/14, Rahul Park, Shikshak Nagar, Kothrud, Pune.

Thanking you,

Dr. Parag Sadgir
Professor in Civil Engineering Department
COEP Technological University Pune
A Unitary Public University of Government of Maharashtra
(Formerly College of Engineering Pune)



Dr. Parag Sadgir
Professor in Civil Engineering Department

COEP Technological University, Pune
(Formerly Collège of Engineering Pune)

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Professor in Civil Engineering Department
COEP Technological University Pune
A Unitary Public University of Government of Maharashtra
(Formerly College of Engineering Pune)

1/91
Recd
Shikshak
25/11/2022

Third Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 25.11.2022

Third Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune

Introduction:

As per reference letter no.4, I have sent an Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune. It is mentioned to kindly send a report after implementation of recommended remedial measures within 45 days after receipt of this first interim report and next visit for the final adequacy report will be scheduled within eight days after receipt of communication about the implementation of remedial measures. But I have not received any implementation report so I have visited site on 17.10.2022 to verify implementation of recommendation. I have sent second Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune. As per your mail dated 24.10.2022, compliance of all recommendations is completed. So, Third site visit is conducted on 25.11.2022.

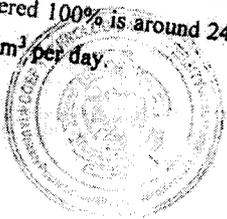
The next visit for the final adequacy report will be scheduled for process evaluation. After the visit, the final adequacy report will be submitted to NSafe Technologies LLP, C-2/14, Rahul Park, Shikshak Nagar, Kothrud, Pune.

Scope of work

1. To prepare plant adequacy report.
2. To provide inadequacy of the plant, if any.
3. To suggest the scheme to make the plant adequate if inadequacy is found.
4. To prepare a final adequacy report for the plant for designed capacity and parameters.

Project description:

As per the information given by NSafe Technologies LLP, Pune, VTP Urban Nest, Undri, Pune project is situated at S. no. 58/2/1A, 58/2/2A, 58/2B at village Undri Pune in Pune Municipal Corporation area. (Latitude from $18^{\circ} 26' 57''$ to $18^{\circ} 26' 56''$ longitude From : Degree: $73^{\circ} 54' 49''$ To : Degree: 73° , Minutes : 54, Seconds : 42). Plot area is 35300 sq.m. and total built up area is 78978.69 sq.m. The sewage Treatment Plant is designed for 250 KLD. The site is a residential complex. As per the information given by NSafe Technologies LLP, Pune, in the residential complex of VTP Urban Nest project, the number of tenements 366 with a population 1830 are connected to this Sewage treatment plant. Considering daily water consumption 135 LPCD, total water consumption is around $247.050 \text{ m}^3/\text{d}$ for domestic use and sewage generation considered 100% is around $247.05 \text{ m}^3/\text{d}$. The sewage treatment plant is designed for a capacity 250 m^3 per day.



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Third Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 25.11.2022

Observations :

This Sewage treatment plant Adequacy Report is based on the visit to

1. Sewage treatment plant,
2. Available Technical details of Sewage treatment plant,
3. Detailed discussions with concerned personnel of Sewage treatment plant.

Units in Sewage treatment plant

Unit Operations:

Unit Operations include:

1. Collection tank
2. Bar screen chamber
3. Oil and Grease chamber ,
4. Equalization tank,
5. Anoxic tank,
6. MBBR Tank
7. Settling tank,
8. Filter feed tank
9. Tertiary treatment with Pressure Sand Filtration followed by Activated Carbon Adsorption
10. Chlorination
11. Ozonation
12. Treated water tank

Recommendations based on available data and field observations:

After the site visit and study of documents provided by of NSafe Technologies LLP, Pune. Progress about recommended remedial measures to minimize odour and noise and to achieve the required outlet treated sewage quality are observed and reported in detail as below;

Sr	Particulars	Observations	Recommendations	Remarks
Column 1	Column 2	Column 3	Column 4	Column 5
1	Raw sewage collection Tank	As per information provided and observations, for the raw sewage collection Tank, one number 5 H.P. sewage transfer pump is provided, which is of higher capacity causing less	It is recommended to provide one working and one standby sewage transfer pump of 12m ³ /hour at 10 m head for improvement in flow. It is recommended to provide recycle line in	Recommendations mentioned in column 4 are Implemented.

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 Professor in Civil Engineering Department
 COEP Technological University Pune
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		retention time in the secondary treatment system.	the collection tank so that flow will be regulated and the F/M ratio will be maintained for improvement in sewage treatment.	
2	Anoxic Tank	As per the information provided and observations, the Anoxic Tank is not operational as per process philosophy.	It is recommended to recommission the anoxic tank with gentle agitation.	Recommendations mentioned in column 4 are Implemented.
3	Aeration Tank	As per the information provided and observations, coarse bubble diffusion is provided in the aeration tank. This is not providing effective oxygen transfer and results in not achieving desired process efficiency.	It is recommended to provide aeration through a fine bubble diffuser to ensure effective oxygen transfer, thus improving process efficiency.	Recommendations mentioned in column 4 are Implemented.
4	Air Blower	Air blower pressure is higher than the designed pressure, resulting in more noise levels. It is difficult to measure air distribution quantification. It is observed that the Noise level is high for the day and night limits as per The Noise Pollution (Regulation and Control) Rules, 2000 (rule 3(1) and 4(1) residential area daytime(6.00 a.m. to 10.00 p.m.) 55 dB(A) Leq and 45 dB (A) Leq (Night time 10.00 p.m. to 6.00 a.m.))	It is recommended to provide Acoustic Hood to reduce the blower noise level to the compliance norms as per The Noise Pollution (Regulation and Control) Rules, 2000 (rule 3(1) and 4(1) residential area daytime(6.00 a.m. to 10.00 p.m.) 55 dB(A) Leq and 45 dB (A) Leq (Night time 10.00 p.m. to 6.00 a.m.)).	Acoustic Hood is provided. Room is partially covered with foam sheets and pumps were provided with covers.

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Dr. Parag Sadgir
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 COEP Technological University Pune
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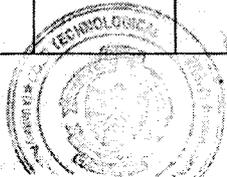
Third Interim report for Sewage Treatment Plant Adequacy for VTP Urban Nest, Undri, Pune dated 25.11.2022

5	Secondary Settling Tank	As per information provided and observations, Tube Settler media is absent in the secondary settling tank.	It is recommended to install Tube Settler Media in the secondary settling tank for improvement in clarification due to the increase in the upward velocity flow rate of treated sewage. Reduction in Suspended solids in the secondary settling tank outlet will improve filter efficiency and quality.	Recommendations mentioned in column 4 are Implemented.
6	Filter Feed Pump	As per information provided and observations, a filter feed pump is provided for 25 m ³ /hr @ 20 m head with one working and one standby pump.	It is recommended to provide a pump with 12 m ³ /hr at 20 m Head and provide recycle line in the filter feed tank to regulate flow.	Recommendations mentioned in column 4 are Implemented.
7	Pressure Sand Filter and Activated Carbon Filter	As per the information provided and observations, Filter capacity does not match with pump and plant capacity and capacity of filters area is very low for 12 m ³ /hr feed flow.	It is recommended to Install new filters of 12 m ³ /hr capacity in parallel operation.	Recommendations mentioned in column 4 are Implemented.
8	Control Panel	As per the information provided and observations, control panel automation is not operational.	It is recommended to provide a control panel with an automatic operation mode following all process logic.	Recommendations mentioned in column 4 are Implemented.
9	Chlorination	As per the information provided and observations, the chlorine dosing pump is not operational.	It is recommended for Repair of Chlorinator.	Recommendations mentioned in column 4 are Implemented.

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10	Ozonator	As per the information provided and observations, Ozonator is not operational.	It is recommended for Repair and recommissioning of Ozonator.	Recommendations mentioned in column 4 are Implemented.
11			A terminal manhole for collecting samples and measuring flow at the end of the collection system is recommended.	Sampling point is provided for sample collection from collection tank.
12			For measurement of inlet sewage flow of the Sewage treatment plant, an electromagnetic flow meter is recommended.	Electromagnetic flow meter is installed .
13			At the sewage treatment plant outlet, a turbine-type flow meter for flow measurement is recommended.	A turbine-type flow meter for flow measurement is installed .
14			It is recommended to provide proper covers to all inspection chambers.	Recommendations mentioned in column 4 are Implemented.
15			It is recommended to provide proper noise insulating covers for pumps.	Recommendations mentioned in column 4 are Implemented.
16			It is recommended to maintain cleanliness in the sewage treatment plant area.	Recommendations mentioned in column 4 are Implemented.
17			It is recommended to provide skilled sewage plant operators with knowledge of the operation and maintenance of sewage treatment plants for smooth functioning.	Training is provided to sewage plant operators Bio culture is added.



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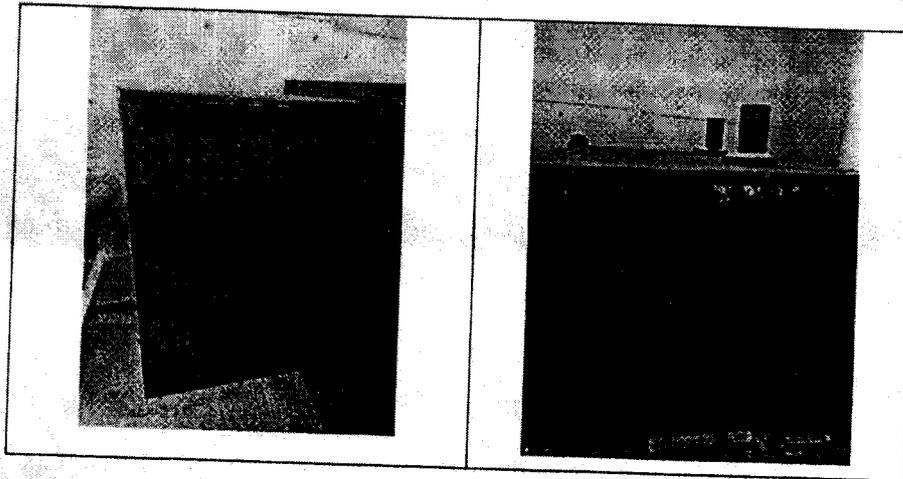
Dr. Parag Sadgir
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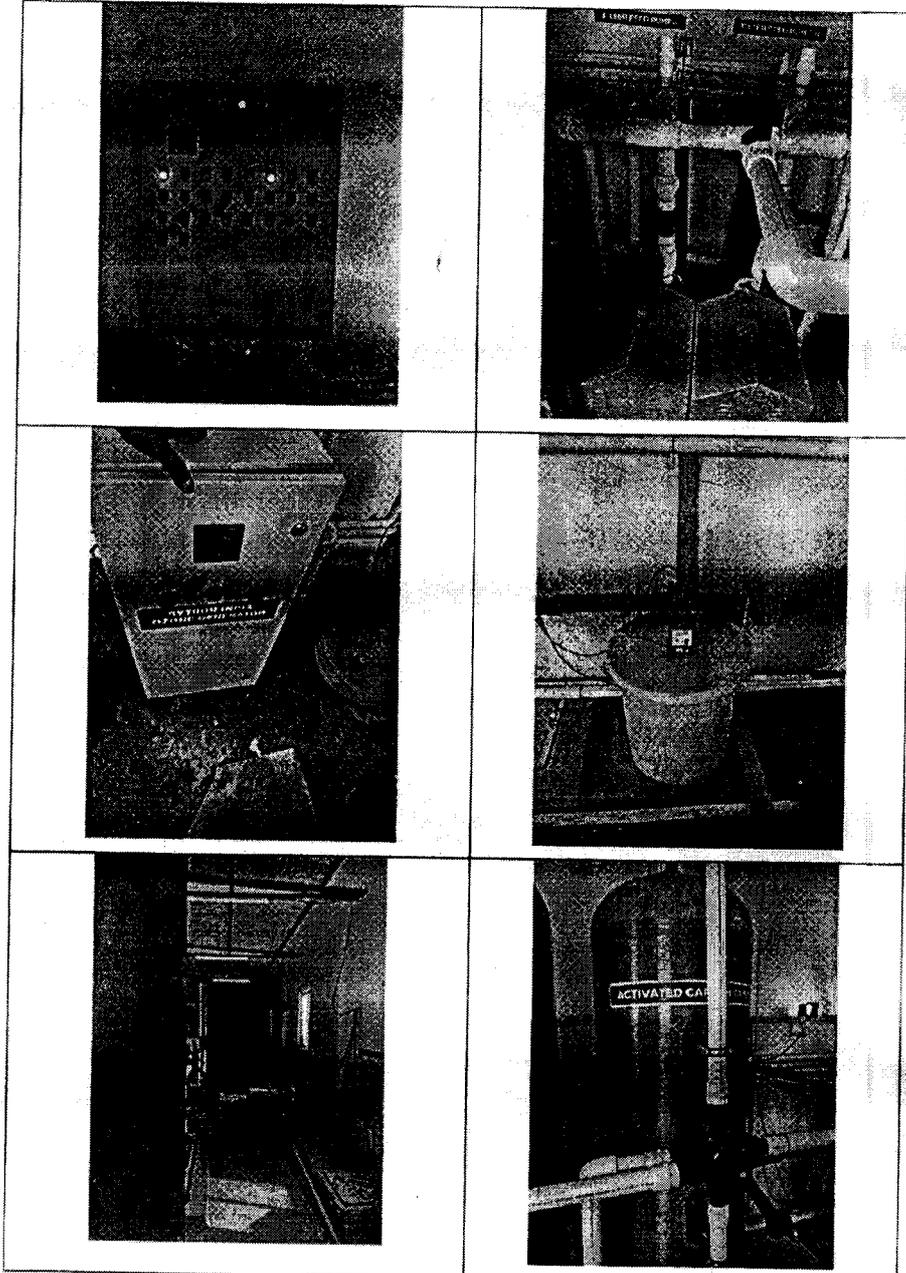
18			It is recommended to provide acoustic treatment for the Air blower rooms to reduce noise levels within prescribed noise levels.	Acoustic Hood is provided. Room is partially covered with foam sheets and pumps were provided with covers.
19			It is recommended to provide deodourising measures to avoid odour nuisance to the surrounding area.	Bio culture is added in equalization tank.
20			It is recommended for appropriate provision for sludge collection and disposal of sludge collected from bar screen and secondary settling tank.	In process.

Photographs during site visit on 25.11.2022



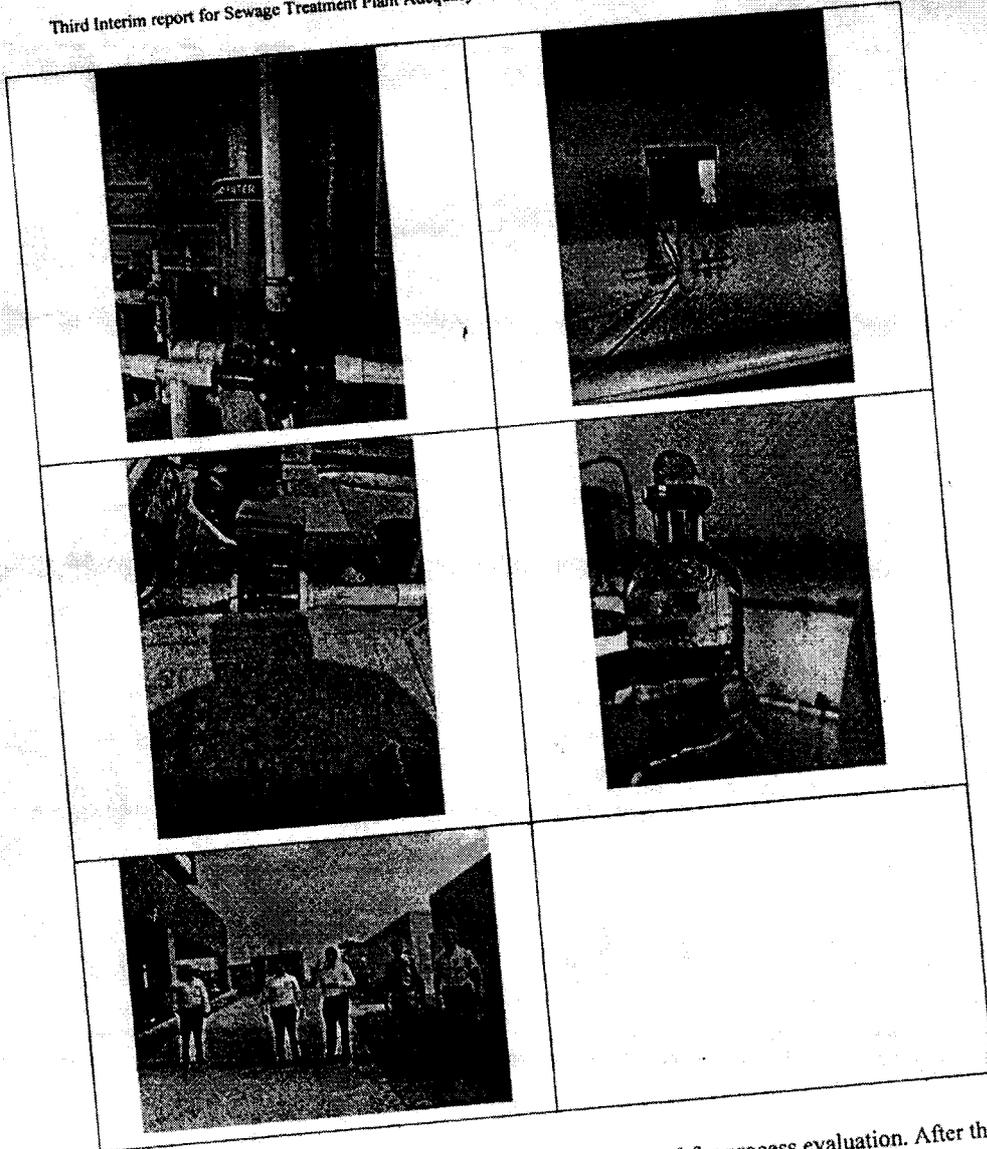
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Dr. Parag Sadgir
Professor in Civil Engineering Department
COEP Technological University, Pune (COEP Tech)
(Formerly College of Engineering Pune)

Dr. Parag Sadgir
Professor in Civil Engineering Department
COEP Technological University Pu
A Unitary Public University of Government of M
(Formerly College of Engineering P

