



हरकोर्ट बटलर प्राविधिक विश्वविद्यालय

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100+ YEARS
1921 - 2021



Report on Industrial Visit to Water Treatment Plant

Date of Visit: 12th September 2025

Venue: 200 MLD Water Treatment Plant, Ganga Barrage, U.P. Jal Nigam (Urban), Kanpur

Organized by: Department of Civil Engineering, HBTU Kanpur

Accompanied by: Ms. Kajol Priya and Mr. Jai Prakash Nayak, Assistant Professors

Students Attended: B.Tech Final Year (Civil Engineering), 35 students

1. Introduction

The Department of Civil Engineering, HBTU Kanpur, organized an industrial visit to the 200 MLD Water Treatment Plant located at Ganga Barrage, Kanpur, operated by U.P. Jal Nigam (Urban). The visit aimed to provide students with firsthand exposure to water purification systems and modern treatment techniques employed for large-scale urban water supply.

2. Objectives of the Visit

To observe and understand the various stages involved in the treatment of raw water from the Ganga River.

To study the design and operation of a 200 MLD capacity treatment facility.

To relate theoretical concepts of water treatment learned in the classroom with real-time practical processes.

To understand the principles of sustainable and safe water management adopted by U.P. Jal Nigam.

3. Overview of the Plant

The Ganga Barrage Water Treatment Plant plays a vital role in supplying potable water to the city of Kanpur. The plant treats raw water drawn from the Ganga River using conventional and advanced treatment methods. The facility operates under U.P. Jal Nigam (Urban) and has a designed capacity of 200 million liters per day (MLD).

4. Treatment Process Observed

During the visit, students observed the following major units of the treatment process:

1. Intake Structure: Collection of raw water from the Ganga River through coarse screening.
2. Coagulation and Flocculation: Addition of alum for particle aggregation under controlled mixing.
3. Sedimentation Tanks: Removal of suspended solids and flocs through gravity settling.
4. Filtration Units: Multi-layer sand filters for removal of fine impurities.
5. Disinfection: Chlorination to eliminate pathogens and ensure water safety.
6. Clear Water Reservoir and Pumping Station: Storage and distribution of treated water to the city supply network.

5. Key Learnings

Insight into large-scale operation and maintenance of water treatment systems.

Understanding the importance of process efficiency, chemical dosing, and monitoring parameters.

Awareness of environmental regulations and the role of Jal Nigam in public health protection.

Real-time exposure to automation and control systems used in modern treatment facilities.



6. Conclusion

The industrial visit to the 200 MLD Water Treatment Plant at Ganga Barrage, Kanpur was highly informative and beneficial for the students. It provided a comprehensive understanding of how theoretical knowledge is applied in actual water treatment operations. The visit enhanced students' technical skills and motivated them to pursue innovative approaches to sustainable water resource management.

7. Acknowledgment

The Department of Civil Engineering, HBTU Kanpur, sincerely thanks the Executive Engineer and staff of U.P. Jal Nigam (Urban), Ganga Barrage Kanpur, for their cooperation and detailed explanation during the visit. We also express our gratitude to Prof. Deepesh Singh, Head of Civil Engineering Department for his support and guidance provided for conducting this visit.



Ms. Kajol Priya, Assistant Professor

Mr. Jai Prakash Nayak, Assistant Professor



Spavija