Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
(Religious Jain Minority)

DEPARTMENT OF CIVIL ENGINEERING
SITE VISIT REPORT

Subject: - Environmental Engineering
Site Visit Date: - 18-01-2023
Site:-Water Treatment Plant, Bhandup
Site Address:- Bhandup Water Complex, Khindipada Bhandup. Maharashtra 400709
No of Students attended the site visit: - 64

As per the curriculum of University of Mumbai, Third Year Civil Engineering students have Environmental Engineering subject in VI semester. In this subject students are studying Water Treatment Plant in detail.

A site visit was arranged to Bhandup Water Complex, Khindipada, Bhandup which is run by Brihan Mumbai Municipal Corporation, Mumbai.

About the Plant: -

Bhandup Water Treatment plant is established in 1980 is one of the biggest plants in Asia, run by Mumbai Municipal Corporation, in the state of Maharashtra, having capacity 2100 MLD. This 365-acre forest complex in Bhandup is bordered by the Borivali National Park and Yeour Hills. Around 450 people work round-the-clock in shifts to ensure that over 12 million Mumbaikars receive a continuous supply of clean water from their taps each day.

Raw water from four lakes viz. Tansa, Bhatsa, Vaitarna and Upper Vaitarna arrives through trunkmains and into the inlet bay of the Bhandup complex. To supply safe drinking water is the responsibility of any water utility. In Water Treatment Plant the raw water is treated for

physical, chemical and biological standards to achieve therequired drinking water standards as per IS 10500-2012. Site visit started with detailed presentation in conference room where all the students were given idea about the treatment plant and how purification system works. After this session student proceeded for actual site visit of plant where Er. Joshi sir guided the students. . They studied sedimentation unit, coagulation, flocculation treatment with addition of PAC, Rapid gravity filters, disinfection.

The plant has well established water-testing laboratory inside the complex, various tests are performed at every stage every day. Mrs. Priya madam explained all the testing done at treatment plant in detail through presentation. There are 20 different sampling pipelines which continuously bring treated water at various stages of the process into the laboratory. Every day, three to four tonnes of chlorine is used to treat water.

In this site visit, students have got the knowledge regarding –

- Functioning of water treatment Plant in actual practice.
- Various essential units of WTP
- Technical details of each unit with its working
- The various routine laboratory tests done on raw as well as pure water.

Remark: PO1, PO2, PO3, PO5, PO8 are mapped.
PSO 1 and PSO 3 are mapped.