

Plant Tour

By Lee Melcher, P. E., Plant Operations Committee member



This year's Plant Operations Tour was held on June 27th at the Metropolitan Water Reclamation District of Greater Chicago Stickney Wastewater Treatment Plant.

The tour was held to provide industry professionals with a behind-the-scenes look at one of the largest treatment plants in the world.

The tour started with a 45 minute introduction by Bill White, Treatment Plant Operator 3. Bill's presentation focused on the service area, collection system and an overview of the Stickney process train. Next the group split into two smaller groups, with one heading to treatment processes and the other to the lab.

The lab section was hosted by John Szafoni and Paul Poshyvanyk and focused on the Biochemical Oxygen Demand (BOD5) and phenol and cyanide analytical areas. On an average day, Stickney's BOD5 lab will run several dilutions on approximately 25-30 BOD5 samples from several different commercial and industrial sites as well as the Stickney treatment plant and Chicago area waterways.

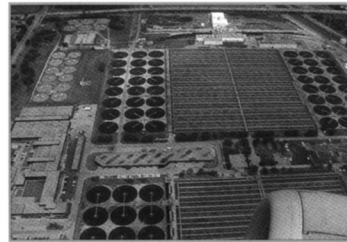


Samples are analyzed for reporting to IEPA, to support the User Charge program and for compliance with the Sewerage and Waste Control Ordinance. The BOD5 analyses are labor intensive and are all performed by technicians. The cyanide and phenol analytical lab is much more automated and uses



dedicated instrumentation to perform the tests. These instruments are able to analyze many more samples per day than the old manual methods and have proven to be reliable and accurate.

The group then toured the research and development greenhouse led by Dr. Kuldip Kumar. The purpose of this facility is to determine the differences between plants grown in native soil and those grown in soil augmented with biosolids.



Each group visited the command center of the treatment plant where each element of the treatment system is monitored and recorded. Due to the

impact the weather plays on the District's role, the weather is also continually monitored.

Bill White and Pete O'Brien, Assistant Civil Engineer, provided a guided bus tour of a few systems of the treatment plant. The first stop was the main pump station for the west facility. Six massive pumps (consisting of four 194 MGD, 3,000 hp pumps and two 265 MGD, 3,500 hp pumps) lift raw sewage to the aerated grit system. We were lucky enough to witness the station pumping at maximum capacity.



After the main pump station, each group was shown the phosphorus removal pilot test battery and the dewatering and biosolids disposal area. The dewatered solids are conveyed to a building where a private entity dries, packages and sells it as a soil augmentation product or it is taken offsite for storage.

The IWEA Plant Operations Committee would like to thank the District and its staff for allowing IWEA to tour the facility and allowing staff to take time out of their busy day to present and discuss their facility.