

Allenton Hosts the Southeast Regional Meeting

The meeting of the Southeast Region of Wisconsin Wastewater Operators' Association (WWOA) was held on March 5, 2019 at the Addison Town Hall 127 First Street, WI, with the Allenton Wastewater Treatment Plant (WWTP) hosting the meeting. The meeting was rescheduled from February 12 due to a snow storm. There were 75 members, 20 non-members, and 9 exhibitors in attendance.

Brandon Kaufmann, from Midwest Contract Operations, was the welcome guest. Midwest Contract Operations runs the water and wastewater treatment facilities for Allenton. Brandon gave a brief history about the operations in Allenton and how Midwest Contract Operations recently started running the water and wastewater treatment facilities for Allenton in the last few years.

Jay Koenitzer, from Helwig Carbon, gave the first presentation titled "The Bearing Protector." Jay covered the essentials of protecting the bearings of electric motors and pumps used with Variable Frequency Drives (VFDs). VFDs help save energy, but they also leave a parasitic current on the motor shaft. This current generally passes through the motor's bearings causing frosting, fluting, and eventual bearing failure. He offered a live demonstration of common mode currents on a motor shaft, and showed how a shaft grounding kit can prevent damage to the motor bearings.

Rusty Schroedel, from AECOM gave the second presentation humorously called "Grit – It's Not Just for Breakfast Anymore." He first gave a detailed description of what grit is, noting it is not just sand or sand like solids but several particles that are heavier and more settleable than other solids in the wastewater. He also noted that these particles can be coated with substances like grease which can impact their ability to be removed with typical grit removal equipment. Rusty then described why operators and design engineers should care about the efficiency of their grit removal systems and reviewed the characteristics of several different types of grit removal equipment. He then reviewed some project case histories. Lastly, Rusty offered some considerations, conclusions, and recommendations for understanding grit removal, identifying potential improvements to existing systems, and potential approaches for installing new grit removal systems.

The third presentation was given by Scott Fischer, from U.S. Water. His presentation was on “WET Testing, How and Why.” He explained that Whole Effluent Toxicity (WET) testing began to be a part of WPDES permits about 20 years ago and its purpose is to guide the DNR on whether an effluent from a wastewater discharger is toxic to the receiving water. Most of the failed tests occur in the private sector versus the municipal side, though that may not prevent municipalities from feeling comfortable when collecting and having their final effluent run through this series of tests. In the WET Analysis, water fleas or *C. Dubia* are exposed to a mixture of your receiving water and your final effluent for a 48 to 96-hour period (Acute Toxicity) and if 50% of them die you have failed that portion of the analysis. This is quantified as the LC 50 and it represents the percentage that die in 100 % of effluent. The reproductive rate of fathead minnows (Chronic Toxicity) in a comparable mixture of final effluent and receiving water for a seven-day period is another measure of the toxicity in the final effluent. This is termed the IC 50 or Inhibited Concentration. That lack of reproduction will constitute a failure, too. If you fail the WET test you receive two consecutive trials to pass it. He also explained some bad actors in your effluent that contribute to failed tests and they include: pesticides, ammonia, lack of hardness, pH, Organic halides, residual halogens, chlorides, COD, polymers, metals, temperature and TDS.

Before taking a break for lunch we had our business meeting. We did have to reschedule the meeting from Feb 12 due to winter storm. Previous meeting minutes and treasure’s report were approved. The DNR were unable to attend due to the meeting being rescheduled, but did supply an informative hand out “Tips and Tricks” related to forms we fill out. Don Lintner, WWOA Vice President, then updated the group on the WWOA State Level. Josh Voigt, WWOA Director, talked about offering a cash prize for the top three teams in the operator’s competition at the WWOA conference. The State Board is asking for all regions to contribute to this cause. No action was taken at that time and will be discussed at the next meeting. An update on the Tuition Aid Program was brought forward to the group and a vote on it may occur May 16 at the Lakeland meeting. We recognized Dan Hass, Allenton WWTP for hosting the meeting. A reminder was given to check out the web calendar for future meetings in your area.

After lunch we resumed the meeting with Robyn Vaupel, from Trestor Hoist and Safety. She gave us an informative presentation on “Crane and Hoist Safety for Operators.” Robyn reminded us all to stay safe

when operating our hoists and cranes. Her talk included a pre-operational checklist and tips on how to safely use our hoists and slings. Although much of this information was a refresher it's was a great opportunity to be reminded of the importance of keeping ourselves and our co-workers safe. She finished her presentation off by highlighting the importance of having an OSHA Periodic Inspection done annually on our equipment.

Our last presenter for the day was Soren Rasmussen, from Landia Inc. Soren came all the way from Canada to give us a presentation on "The Nitty-Gritty of Chopper Pumps." He gave us a brief history on how Christian Olgaard invented the pump to macerate and pump manure. Chopper pumps consist of a pump with a knife cutting attachment. This allows liquids with high solids to be pumped without constantly clogging the pump. He also talked about popular applications and a few include: liftstations, scum pits, anaerobic digesters, and sludge holding tanks to name a few. He finished by saying that chopper pumps are not the most efficient pumps for pumping, but definitely serve their purpose in the right applications.

The meeting was adjourned and the day ended with a plant tour of the Allenton Wastewater Treatment Plant. A big thank you to Allenton for hosting the day, and to USA Bluebook for sponsoring the morning breakfast.

Submitted by Wayne Castle, Southeast Region Secretary.