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An Association for Industry

THE INDIANA INDUSTRIAL OPERATORS ASSOCIATION CATERS TO A SPECIALIZED GROUP OF CLEAN-WATER PROFESSIONALS WITH A CONFERENCE, CREDENTIALING, MENTORING AND MORE

By Ted J. Rulseh

Municipal and industrial clean-water operators are brothers and sisters in arms, facing different treatment processes but many of the same basic challenges and the same ultimate objective: protecting water resources.

But while municipal operators are well connected by various regional and state-level associations, most industrial operators don't have a similar home base. A notable exception is in Indiana, where for a quarter century an association has represented the industrial side of the profession.

The Indiana Industrial Operators Association reports 1,200 members and an active program that includes the Wastewater Industrial Technical Training Education Conference (WITtec), which marks its 25th anniversary in Indianapolis March 30 to April 1. It's sponsored by the IIOA and the Indiana Water Environment Association.

The conference offers industrial- and municipal-focused concurrent sessions covering regulatory, industry and pretreatment topics, along with current technical information that attendees can take back and put in practice at their facilities.

The association offers a range of professional credentials that include Registered Industrial Wastewater Professional (RIWP, Basic, Masters and Ph.D.) and Industrial Environmental Manager (IEM, Basic and Masters).

Three leaders of the association talked about it in an interview with *Treatment Plant Operator*. They are:

- Al Goodman, P.E., RIWP-Master, principal at CDM Smith, IWEA and Water Environment Federation past president, and IIOA board member
- Thomas Martin, consulting chemist with Delta Chemicals and Equipment, IIOA co-founder and past president
- Russell Eiler, CEF, RIWP-Master, director of global environment, health and safety compliance with Allegion, IIOA board member

tpo: Do other states have similar associations for industrial operators?

Martin: I believe about six states license industrial operators separately from the municipal side, but I don't know of any other state associations that are strictly formatted around industry.

tpo: How did the IIOA get its start?

Martin: I was a member of the IWEA, which was then called the Indiana Water Pollution Control Association. I was on the industrial committee, and we always felt like stepchildren. We weren't very successful in getting industrial people to present papers and come to the forum with the same



Al Goodman



Thomas Martin



Russell Eiler

enthusiasm as people on the municipal side. Finally, seven of us from industry decided to form the IIOA.

tpo: What was your first step toward organizing the association?

Martin: We decided to put on a conference, and even before it was held, we got over 100 people to sign on as charter members. A comment from industrial operators was that at the municipal conferences all they heard were papers on activated sludge. It's not unusual to see activated sludge in food processing, for example, but they wanted to hear more. Back then there was a lot of metal finishing done here. Our people wanted papers about new technology in that area. So that's what we did during our first conference. Today, for a typical three-day conference, we'll have a total of more than 600 people attend.

“Industry faces a lot more challenges than municipalities do. For one thing, the influent concentrations in industry are usually much higher.” AL GOODMAN

tpo: Is the attendance limited to operators from Indiana?

Eiler: I work for a global company, and we have wastewater treatment plants and operators across the globe. I thought it would be good to bring our operators and environment, health and safety managers from our facilities together for what I feel is a very beneficial conference.

tpo: As you see it, what do municipal and industrial operators have in common?

Goodman: An important commonality is a desire to understand the treatment processes, and the technology and where it's going, so that they can become better operators and make adjustments that make their lives easier in their own treatment plants.

Martin: We also share a desire for clean water. Both groups are water-quality protectors.

tpo: What are the major differences between municipal and industrial operators?

Goodman: Industry faces a lot more challenges than municipalities do. For one thing, the influent concentrations in industry are usually much higher. It's not uncommon in industry to see BODs in the tens of thousands and TSS and FOG in the hundreds of thousands of milligrams per liter. In addition, industrial flows can change radically, even during an operational day. There may be a product changeover that results in the influent changing. Operators are challenged with much more variability in the wastewater.

Eiler: We have some very low discharge limits in industry. In our facilities, we have parts per trillion for mercury and a parts per billion requirement at one of our sites for arsenic. Also, industry wants to reuse water within the production process and looks at it from a cost perspective. There's an emphasis on the dollar factor that isn't as common to municipal plants.

tpo: Are there differences in how industrial treatment operations are regulated?

Goodman: Industries are most often regulated by the municipalities through our pretreatment permits. The cities have pretreatment coordinators. The IWEA has a Pretreatment Committee, and they have a conference, too, with roundtable discussions and other events.

tpo: Does the IIOA interact with the pretreatment coordinators?

Goodman: The IWEA Pretreatment Committee invited us to their conference one year, and we presented some papers. Then, since our conference was much bigger, we invited them to join with us and gave them their own venue. It gives them a chance to meet those of us in industry. We want the regulated people to know their regulators on a first-name basis. The coordinators gain technical information about industry and how we treat the water before it goes to the city sewer system. So when they're inspecting an industrial system, it helps them to understand what they're looking at and how that process and technology should work.

tpo: What are some of the most common treatment processes found in industry?

Martin: Dissolved air flotation is common for removing FOG. Food processing facilities use membrane bioreactors and moving bed bioreactors. On the metal finishing side, we use technologies like chromium reduction, cyanide oxidation and metal hydroxide precipitation. The technology is much more complicated. For the most part, the processes are set up for continuous flow.

tpo: Why was it important for the IIOA to establish the professional credentials?

Martin: Originally, the barrier to entry for a career in Indiana was that if you didn't have one year of experience, you couldn't take a wastewater license test. You went to get a job, they asked if you had a license. You said no. They asked why. You said, "I don't have the experience." They wouldn't hire you so you could get the experience and get your license. We were fortunate to be able to get that changed. Our first credential was Registered Industrial Wastewater Professional. For that, you had to take a course and pass a rigorous test. You also had to have at least one year working in industry, but that wasn't limited to hands-on experience in a wastewater treatment plant.

tpo: Beyond attaining licensing, how do the credentials benefit the operators?

Goodman: Credentialing helps industrial treatment operators in their performance reviews. Many industries put an emphasis on credentials

as a mark of accomplishment, so it is financially beneficial to operators to have them.

tpo: Are any credentials available to the pretreatment coordinators?

Goodman: Years ago, pretreatment coordinators had nothing like the credentials we have. So we got a team together and created the Registered Pretreatment Coordinator credential, and they ran with it. During our conference, the IWEA Pretreatment Committee offers two courses that are open to all, and credentials are awarded based on examination and experience criteria. There is a Registered Pretreatment Coordinator credential, and a Certified Pretreatment Coordinator credential for more experienced professionals.

tpo: What is the nature of the IIOA mentoring program?

Martin: The intent is to help people qualify for an industrial operator license. It's an online program. Homework assignments are based on the textbooks they have to study for the state exam. After each assignment, they take a quiz. When they finish the first textbook, they meet with a mentor at a public library and take a three-hour midterm exam. When the exam is over, the student and mentor go through and grade the exam. If the student missed questions, the mentor explains why. Then they go through the same process with second textbook and take a mentored final exam. This program has greatly increased the pass rate on state exams.

tpo: After the 25th annual WITtec event, what lies ahead?

Goodman: We see the conference growing into a regional, if not a nationwide, event. We want to attract a lot of different industries from all over the country. We see the opportunity for the IIOA to grow and expand.

tpo