New Year, New Initiatives

WQA prepares for new and ongoing ventures in 2013

By Tom Palkon

The Water Quality Assn.'s (WQA) Gold Seal product certification program continues to grow and expand to meet the needs of the industry. This is being accomplished while maintaining quality control procedures and customer service. Regulatory acceptance of Gold Seal certification has reached a new high with the addition of the U.S. Environmental Protection Agency's (EPA) Energy Star program, which is now accepting the Gold Seal program for compliance of water coolers.

WQA will be conducting its 2013 consumer study later this year, but preliminary data demonstrate that consumers and retail buyers' recognition of the Gold Seal certification mark has reached an all-time high. The following are some of the initiatives the program has been working on for the water treatment industry.

Launching Eco-Labeling

For the past two years, WQA has been developing the first multi-attribute sustainability standards for the industry. It is in the final stages of pilot testing the first three environmental standards.

The eco-labeling task force has developed sustainability standards for company management systems, activated carbon and point-of-use products that use activated carbon. These standards will be used to demonstrate to consumers, regulators and retail buyers that products labeled with the new sustainability mark have been produced in a sustainable manner.

The new certification program is scheduled to launch at WQA Aquatech USA 2013. After its release, WQA plans to focus its sustainability efforts on creating standards for other water treatment technologies, such as ultraviolet, reverse osmosis (RO), ion exchange and more.

Electrochemical Demineralization Certification

Typical cation exchange water softeners have been under regulatory attack due to the salt used to regenerate the ion exchange bed and the water sent to waste during the regeneration process. Some areas of the country have even banned the use of these softeners.

In 2011, industry members asked WQA to develop a product performance standard and test protocol for point-of-entry (POE) electrochemical demineralization systems.

Like softeners, electrochemical demineralization systems are designed to handle hard water. Unlike softeners, they are not designed to deliver soft product water with less than 1 grain of hardness per gallon. They reduce hardness and total dissolved solids (TDS) through the same electrochemical mechanisms that are being utilized to remove calcium and magnesium. They do not use salt.

Some of the questions that the task force set out to address included:

- Will electrochemical demineralization systems continue to reduce hardness over time?
- How much electricity do these systems consume?
- How much water is sent to waste?
- Can these systems handle the diverse water usage patterns that a POE system is subjected to?

Electrochemical demineralization shows promise as a salt-free alternative to softeners. Through a collaborative task force including several key industry members, WQA has developed a draft performance standard for these systems.

The standard provides a rigorous challenge with hard water and focuses on hardness and TDS reduction. The challenge water is similar to that used for softeners, with hardness of 20 grains per gal. To qualify, systems must be capable of reducing hardness and TDS, and they must pass established protocols for evaluation of material safety and structural integrity. The standard also requires testing and disclosure of key operational factors that are important to consumers, such as chemical consumption and power usage.

Scale Reduction Standard

Manufacturers in the water treatment industry have long expressed concerns about the wide array of uncertified technologies that claim to reduce or prevent scale buildup. Physical water treatment devices such as magnetic treatment units have been at the center of this controversy and provide an example of how confusing the issue can be for consumers, regulatory agencies and manufacturers and dealers of tested and certified products that are recognized for their ability to reduce scaling, such as softeners.

Physical water treatment devices have been in use for decades, but have been a source of controversy and skepticism due to of the lack of a performance standard. WQA formed a magnetic task force made up of key stakeholders and released a comprehensive report, but many questions remained.

Research studies in the U.S. failed to produce evidence that the devices work. Meanwhile, the technology remained popular based on anecdotal evidence, especially in Europe. It was clear to industry members that a reliable performance standard was needed to test these devices. This led to the drafting of a new standard called IAPMO Z601, which is now ready for validation.

WQA has volunteers to help in the validation process. It expects to complete the validation testing in June 2013.

Portable Ion Exchange Certification

WQA has been asked by industry members to develop a protocol that can be used to certify portable ion exchange processes. This protocol is intended to describe best practices for quality assurance, and may later be used as a seed document for the development of an American National Standards Institute (ANSI) standard. Task force work on this protocol is scheduled to begin in the first quarter of 2013.

Portable ion exchange attempts to minimize wastewater generation and salt discharge caused by residential softeners. A trained technician visits the home on a regular basis to swap out the spent resin tank with a freshly regenerated one. The homeowner pays a monthly fee and avoids the cost and hassle of regeneration.

Meanwhile, the spent resin tank is returned to a central location, where it is regenerated under controlled conditions to minimize wastewater generation and salt discharge. This is similar to the process used for deionized water generation in laboratories and industrial settings throughout the U.S., often called portable exchange deionization.

Evaluating RO Efficiency

Model code writers, regulators and consumers are becoming more sensitive to low RO efficiencies. WQA has been

asked to assist in finding better ways to promote the innovative technologies that are already available for dealing with this issue. Toward that end, WQA has formed a new task force.

The RO efficiency task force will discuss how the industry can provide more exposure for RO products that provide innovative ways to reduce water waste. Topics on the agenda include:

- What degree of efficiency is necessary and feasible?
- How can waste reclamation be reflected in standard literature requirements to show a better efficiency?
- Is there a way to expand the visibility of the efficiency rate in labeling or literature requirements?
- Do we want to establish an "efficiency rated" limit?

Taste Testing Protocol

The WQA laboratory has an established panel of trained taste-testing specialists. Normally they are called upon to help manufacturers perform research and development-type testing.

Recently, WQA was asked to develop a protocol that incorporates the use of an independent panel for verification of a new type of taste claim. This claim would go above and beyond the existing taste and odor claim that is available through NSF/ANSI Standard 42, which is based solely on chlorine removal.

One approach for this new taste claim would be to challenge the system with a standardized test water that simulates tap water, then have a taste panel appraise the results. To increase the challenge, a potable challenge water could be developed that includes various impurities that contribute to poor taste.

Gold Seal Steering Committee

WQA has established a new technical task force (steering committee) to help the industry stay on top of the numerous product standards and to develop new standards driven by market needs. Those who have been active in WQA for more than 10 years may recall the association's previous task forces on ion exchange, RO, filtration and more. These retired task forces focused on recommending modifications or revisions to industry performance standards.

The newly established Gold Seal Steering Committee will discuss standard development, certification program development and modifications to current certification standards. More specialized task forces will be spun off from this committee to accomplish priorities as needed. The inaugural meeting will take place during WQA Aquatech USA 2013 on April 2 from 11:30 a.m. to 12:30 p.m. The meeting is by invitation only.

There are a number of reasons to attend WQA Aquatech USA 2013 as companies prepare for an improving world economy. If you currently participate in the Gold Seal program or are interested in any of the new initiatives discussed in this article, stop by the WQA booth or set up a meeting with your project coordinator or his or her supervisor. *wqp*

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