CA-NV AWWA’s Water Treatment Committee Takes on NSF/ANSI 61

The following is an adopted drinking water regulation from the water code:

§64591 Indirect Additives.

a) After March 9, 2008, a water system shall not use any... product in the production, treatment or distribution of drinking water that will result in its contact with the drinking water that has not been tested and certified as meeting the specifications of NSF International/American National Standard Institute (NSF/ANSI) 61-2005 / Addendum 1.0-2005 (Drinking Water System Components – Health Effects)...

Problem: Some materials used in drinking water systems that are NSF/ANSI 61 certified, are not available or cannot be certified in a timely manner.

For example:

Concrete - The NSF/ANSI Std 61 testing procedure for concrete is a minimum 4-week process and often extends to months. The testing and analysis period is outside the practicality of concurrent testing during construction and will need to be scheduled ahead of time. Alternatives to a failed test may include demolition, re-pour and re-test the concrete with no guarantee to pass, or apply ANSI Std 61-approved coatings to the entire surface in contact with drinking water. Both options are extremely costly and can take away from already sparse infrastructure investment dollars.

An Ad Hoc committee has been formed out of the CA-NV AWWA Water Treatment Committee to start to better understand the ANSI Std and assist water professionals with obtaining compliance with the regulation and protecting public health. Representatives of the committee have met with CDPH Drinking Water Program to discuss and clarify application of the regulation since the language in the regulation can result in differences in interpretation.

One of the clarification that we received is the point at which water is considered drinking water for this regulation is the point where the water reaches the
headworks of the water treatment plant. Another clarification that we received is that a storage tank can be constructed of components and materials that meet the waterworks additives standards as a means of achieving compliance.

In the past, some projects may have been held up due to struggles with proving “all components” meet the ANSI/NSF STD 61. Project proponents should be familiar with the blanket exemption within ANSI/NSF STD 61 to insure the application of the standard is warranted. The committee points out that the exemption often applies to gaskets or materials in the interior of pumps that have very minimal contact with water.

**ANSI STD 61-2005 Exemption**

*Section 3.3.2 Established minimum test batteries…”products, components, or materials whose diluted surface are in the application is less than or equal to 0.001 or 0.0001 for static or flowing conditions respectively, shall not require testing.”*

The California Water Works Standards allow water systems to propose and use alternatives to the requirements specified in the standards that “would provide at least the same level of protection to public health.” CDPH has established a technical review team to review various proposals from water systems to ensure consistency. The technical review team is spearheaded by Eugene Leung, Eugene.Leung@cdph.ca.gov who is a Senior Sanitary Engineer out of CDPH’s office in Richmond, Ca. If you have a question regarding the application of water code 64591, work with your local CDPH District Engineer who will consult with the CDPH technical review team as needed.

If individual components of concrete are not certified as approved by ANSI/NSF Std 61, CDPH has encouraged project proponents to submit equivalent analytical testing procedures and analytical data for key components of concrete such as aggregate and cement for consideration and review by CDPH’s technical review team. This data is compared to the maximum limits specified in ANSI/NSF Std 61
and can be approved for use and is equally protective of public health if the applicable parameters are tested and they do not exceed the established limits in ANSI/NSF Std 61. Other major components such as admixtures that are certified by ANSI/NSF Std 61 are readily available while certified cement is not available in all locations throughout California, and certified aggregate is less prevalent.

Pretesting of the constituents in concrete have been found to yield faster data turnaround times than sending concrete cores to NSF labs (in Michigan) for certification thereby reducing owner, contractor, and supplier uncertainty during the bid process.

For additional information about these efforts, to learn more, or be included on updates from the committee, contact Joy Eldredge Jeldredge@cityofnapa.org or Eugene Leung Eugene.Leung@cdph.ca.gov.