X NSF/ANSI 58 – Reverse Osmosis Drinking Water Treatment Systems

B. Nitrate/nitrite (DWTU-2014-12)

Motion: Form a task group to consider the option of a higher influent challenge concentration for nitrate. R. Regunathan motioned; D. Riggs seconded.

Discussion: Shen Huang, Jeanette Pantoja, and Jennifer Clary reviewed the issue paper they submitted for discussion at the 2013 JC meeting. They would like for the JC to consider including a secondary requirement for RO systems under NSF/ANSI 58 to address the high levels of nitrates that are being detected in agricultural regions in California. The question was raised if there is any new information available to support this. J. Pantoja stated that the most recent findings for Monterey County were submitted to the JC after the last JC teleconference in August 2013. This included data for public systems. However, more recently they have been getting data from well systems and have seen nitrate levels as high as 600 ppm.

R. Regunathan stated that there are systems directly certified for removing nitrate. He asked the issue proponents if they have tested using these certified systems and have found that they are not removing the nitrate. J. Pantoja referred to the example of one family that had 200 ppm nitrate and installed one of these systems. It reduced the nitrate to 88 ppm, but that is still double the maximum level. E. Leung stated that booster pumps will help the performance. J. Pantoja stated that they have a lot of areas that are in the 100-300 ppm range for nitrate.

R. Herman stated that he has reviewed the data that was submitted. Nitrite is ok, but the nitrate levels are high. He agreed that a different evaluation is justified. R. Regunathan stated that this group should provide input on what the influent challenge levels should be, if different than what we have been using in the standard. Then it’s up to manufacturers to provide the technology to meet this.

The question was raised if there is also TDS data available. S. Huang stated that they do not track that. It would be difficult since they don’t track individuals. However, they could get some general data for the area. L. Trapp asked why RO treatment was used instead of anion exchange. S. Huang explained that they had very limited options. The systems had to be certified. Now that California has changed the registration program, it will open up new options. E. Leung noted that the problem with anion exchange is that water systems cannot use this due to brine adsorption in this valley. R. Regunathan agreed that it would be helpful if the group could provide more information on TDS.
S. Murphy stated that when the nitrate levels are this high, one should consider testing a RO specifically for this with a post filter. The best approach is a treatment train, where you would test the whole system, not just the membrane itself. There was general agreement that a task group should be formed to investigate this further.

**Vote:** All in favor.

**Motion passed.**

**TG:** R. Regunathan (chair); D. Riggs; S. Murphy; E. Leung; S. Huang; J. Pantoja; G. Hatch; NSF staff (TBD); S. Lee; G. Lai; K. Seeger; T. Sorg; Dr. Dennis Clifford