Wednesday, May 10, 2017

I Opening Remarks

Joint Committee (JC) Chairperson Bob Powitz welcomed everyone and called the meeting to order. M. Leslie took attendance of those voting members participating via phone and read the antitrust statement. B. Powitz introduced two recently appointed committee members: Mikiko Nakayama (Mitsubishi Chemical Cleaning Corporation) and Philip McCrory (consultant in the user category). With these changes, the current membership of the JC is now balanced with 11 industry representatives, 11 public health/regulatory representatives, and 11 members from the user category.

II Review of Agenda

Motion: The May 2017 agenda is acceptable as written. F. Brigano motioned to accept the proposed agenda; S. Ver Strat seconded.

Vote: All in favor.

Motion passed.

III Review of 2016 Meeting Summary

Motion: B. Powitz asked if there were any additions or corrections to the May 2016 Joint Committee on Drinking Water Treatment Units meeting summary. None were noted. A. Patil moved to accept the meeting summary as written; T. Palkon seconded.

Vote: All were in favor.

Motion passed.

IV Standards Update

M. Leslie reviewed the recent and current open ballot issues.

V Material Safety Issues / Issues Affecting Multiple DWTU Standards

A. Evaluation criteria harmonization (DWTU-2017-3)

Motion: Ballot proposed language as written. D. Riggs motioned; F. Brigano seconded.

Discussion: K. Licko provided a brief background on how the pass/fail criteria are determined under the Health Advisory Board. The task group is recommending to remove two columns from the section 4 extraction tables: the total allowable concentration (TAC) values and the drinking water regulatory levels (MCL/MAC). The values in NSF/ANSI 61
would be referenced instead. She noted that there is value is leaving the other information in the table (maximum reporting limit, EPA methods, etc.). There are currently 20 inconsistencies between the DWTU standards and NSF/ANSI 61. Nine levels are lower than what is listed under NSF/ANSI 61. Of these, eight are simply outdated and should be revised to match the NSF/ANSI 61 value. K. Licko reported that the task group was unsure about the rational for the aluminum level being lower, however (0.5 mg/L vs 9 mg/L). The NSF/ANSI 61 value of 9 mg/L is based on health effects. The task group agreed that all nine contaminants should be harmonized with NSF/ANSI 61.

K. Licko reported that there are five contaminants that have higher levels in the DWTU standards. Three have been determined to be typos. For one contaminant, naphthalene, no traceable source could be found. For lead, it was noted that there are inconsistencies between NSF/ANSI 60 (0.015 mg/L), 61 (0.005 mg/L), and the DWTU standards (0.010 mg/L). K. Licko explained that NSF/ANSI 61 was updated as a result of a recommendation from the DWA Lead Task Group (see 61-2006 Annex F for more information). However, a 5-year implementation date was given and this value was revised in the standard in 2012. It was noted that when this change was made it should have been made to NSF/ANSI 60 as well, but was missed.

K. Licko stated that this issue was presented at the recent WQA conference to obtain industry feedback. Two main concerns were noted. First, the question was raised on whether the lead effluent for performance testing should be changed. Second, it was suggested that the differences in the exposure protocols between NSF/ANSI 61 and the DWTU standards should be reviewed. Both of these are separate issues that would need to be considered with the submission of new issue papers.

There are six contaminant levels that are not in NSF/ANSI 61. The Joint Peer Review Steering Committee (JPRSC) is working to reconcile these values to add to table D1 in NSF/ANSI 61.

It was clarified that the maximum reporting limit is simply an informational tool for the labs. Under NSF/ANSI 61 there is a combined column for the TAC and MCL, and the notes identify from where the regulatory values were derived.

F. Lemieux reported that members of the regulatory forum discussed the inclusion of the pass/fail criteria annex in the DWTU standards. K. Licko noted that the standards are already referencing NSF/ANSI 61. R. Regunathan stated that alternatively, the standard could forgo the reference to ANSI/ANSI 61 and just update the 14 inconsistent contaminants to the harmonized values. K. Licko explained that one still has to consider the other 1,500 chemicals that are listed under NSF/ANSI 61, however.

**Vote:** All in favor.

**Motion passed.**

**Second Motion:** Add NSF/ANSI 61 pass/fail criteria table D1 to the DWTU standards as an informative annex. T. Palkon motioned; R. Regunathan seconded.

F. Brigano questioned why an annex would be needed in the DWTU standards and stated his belief that it would be much easier to simply reference NSF/ANSI 61. R. Regunathan stated that from the regulator’s point of view, it adds the burden of having to refer to multiple standards. K. Licko reiterated that this is the current practice; there are 1,500 chemicals included in the formulation review. B. Powitz stated that this will help a regulator’s understanding. They may not currently know to also use NSF/ANSI 61. M. Leslie expressed concern that having the tables in multiple standards may increase the chance for errors when publishing. The question was also raised on whether it would be confusing
to the user to have an informative annex that actually includes normative requirements under NSF/ANSI 61. M. Leslie stated that there have been discussions in the past to pull the tables out of NSF/ANSI 60 and 61 altogether and create a separate document. This is something that the DWA JC may wish consider again in the future. G. Hatch raised the question of whether an electronic database of the annex would be possible. F. Brigano suggested that it makes sense to provide NSF/ANSI 61 along with the DWTU standards. S. Ver Strat agreed with the concern of maintaining multiple tables. However, he noted that having a single reference in the DWTU standards would be beneficial for international use.

**Vote:** – 29 in favor; 0 opposed; 1 abstention (A. Patil).

**Motion passed.**

**B. Extraction tables (DWTU-2017-6)**

**Motion:** Form a task group to look at the impact of the proposal to revise section 4 and eliminate tables 4.1, 4.2, and 4.3 from the DWTU standards. F. Lemieux motioned; F. Brigano seconded the motion.

**Discussion:** T. Palkon explained that the materials evaluation under section 4 currently ensures that contaminants aren’t being added to water from the products themselves. He provided a brief background on the testing required under NSF/ANSI 61. T. Palkon stated that he was pleased to see that there is not much concern from industry to harmonize the 20 contaminant values that are inconsistent. He stated that he is proposing to go above and beyond this revision, however, and remove tables 4.1, 4.2, and 4.3 from the DWTU standards altogether. Simply having one set of pass/fail values will be better. He also proposed to include a statement referring to the minimum test batteries in NSF/ANSI 61 tables 3.1 and 3.2, include a reference to NSF/ANSI 61 Annex C for acceptable materials (e.g., stainless steel), and add a section on the identification of analytes (using language from NSF/ANSI 61).

R. Herman stated that if the proposal is only about the inconsistency in the section 4 tables, the previous motion already addresses this. T. Palkon acknowledged that his concern is more than just the inconsistent set of tables. He explained that a major revision was made to section 4 a few years ago and POE moved to NSF/ANSI 61. R. Herman stated that POE fits the NSF/ANSI 61 testing model. POU s are significantly different in that they are not permanent installations. There is a difference in how we treat them, expose them, etc. T. Palkon clarified that the intent is not to eliminate section 4, but to reference the tables in NSF/ANSI 61. R. Herman, F. Lemieux, and F. Brigano expressed concern that the JC needs to understand the potential impact of making this change first. There could be unintentional consequences. B. Powitz asked the group if there would be value in forming a task group to assess the potential impact of the proposed revisions. F. Lemieux stated her agreement, and added that it could likely be a quick assessment. K. Licko expressed her concern that there is value in knowing that the test is done the same among different certifiers. Removing the tables from section 4 will make it more difficult to move between labs.

**Vote:** All in favor.

**Motion passed.**

**TG:** T. Palkon (chair); S. Ver Strat; R. Regunathan; R. Herman; K. Seeger; D. Wassilak; G. Lai, E. Valentine; D. Riggs; B. Hatton; K. Sauerbier; K. Licko; E. Leung

**C. Analytical method for nitrosamines (DWTU-2017-8)**
**Motion:** Form a task group to add guidance in the standards on mitigating contamination and high variability when doing extraction testing for nitrosamines. R. Herman motioned; T. Palkon seconded.

**Discussion:** D. Weinberger reported that Miltec, Inc., custom formulates the vinyl plastisol used to manufacture endcaps for POU water filters. The finished filters are tested in accordance to NSF/ANSI 42. Although they do not produce an elastomer or use raw materials that contain any amines or precursors to nitrosamines, they have had issues with nitrosamines being detected in the products during testing. Much time and money has been spent to undergo testing at two different facilities to show that these products do not contain nitrosamines. D. Weinberger pointed out that although the analytical method for detecting nitrosamines was changed from EPA Method 625 to 521, NSF/ANSI 42 still references the prior. He also noted that table 4.2 under NSF/ANSI 42 does not contain the complete list of nitrosamines. This could allow for materials to pass even though they contain NDMAs.

D. Weinberger reviewed the differences between EPA Method 521 and the current protocol under NSF/ANSI 42, including the reagent water and the fact that the NSF/ANSI 42 protocol allows for the subtraction of analytes found in the exposure water. He recommended that a task group be formed to add guidance in the standards and address the high variability when doing extraction testing for nitrosamines.

T. Palkon stated his agreement that the JC could do some more work to clarify this. He agreed with the premise that sometimes there are nitrosamines in the municipal water. T. Palkon and K. LeVanseler both agreed that the EPA Method 521 is an appropriate analytical method and quite reproducible. The real issue is contamination picked up along the way. K. LeVanseler confirmed that the protocol under NSF/ANSI 42 does allow for subtraction of the control sample, even though NSF/ANSI 61 is being referenced. She reported that NSF has been conducting some internal studies to address contamination and the variability of nitrosamine in the source water. R. Herman added that the issue isn’t the background level as much as it is the variability. The challenge is making the test water consistent. K. LeVanseler stated that the NSF lab has seen anywhere from 24 ppt to 45 ppt in DI water.

**Vote:** All in favor.

**Motion passed.**

**TG:** K. LeVanseler (chair); D. Weinberger; T. Palkon; T. Spoden; A. Patil; S. Lee; A. Fenwick; M. Huntoon

**D. FDA Compliance (DWTU-2017-9)**

**Motion:** Form a task group to create optional testing to confirm compliance with the FDA and European regulations. H. Patel motioned; K. Seeger seconded.

**Discussion:** H. Patel reviewed the response from the FDA to the Joint Committee with regards to K. Sauerbier’s inquiry last year. He noted two things. First, in the memorandum of understanding signed by the EPA and FDA, there is wording that all water used in food remains food, and under FDA jurisdiction. Second, the response from Kevin McAdams of the FDA stated that the EPA has authority to regulate water from public water supplies. However, there are still questions regarding what is covered under the FDA. H. Patel recommended the formation of a task group to clarify what is covered. B. Powitz referred to the example of ice machines that are known as food contact zones. They are covered under the food standards. Anything that touches food becomes a food contact surface. B. Powitz noted that a sanitarian out of New York tried to get a clarification from the FDA, but agreed that it is still vague.
The group discussed the possibility of an optional test to ensure that a product is compliant with local laws. It was pointed out that this will vary depending where a product is being marketed and sold.

The question was raised on whether the FDA has requirements that go above and beyond what the EPA requires. H. Patel stated that his understanding is that the FDA is tested to a much different protocol than the EPA materials extraction testing. K. Sauerbier stated that the EPA and FDA should come to an agreement on the criteria and area of purview. S. Ver Strat expressed concern that this may be outside of the purview of the Joint Committee. The JC is charged with assuring the safety of a product in the marketplace, not to ensure compliance with regulatory agencies. It is the responsibility of the manufacturer to comply with the law.

T. Palkon suggested that the JC try to get someone from the FDA to participate on the task group. B. Powitz agreed and stated that this could be done through contacts at the CPHC.

**Vote:** All in favor.

**Motion passed.**

H. Patel (chair); M. Starostin; E. Valentine; K. Seeger; S. Murphy; S. Ver Strat; K. Sauerbier; T. Palkon; R. Regunathan; C. Caldwell; K. Licko; D. Riggs; J. Kempic

**E. Health Advisory Board updates**

**Discussion:** K. Cox provided a brief background on the Joint Peer Steering Committee (JPRSC) and their effort to consolidate current pass/fail criteria and harmonize the external peer review process for future risk assessments. He reviewed the proposed updates for the pass/fail criteria under NSF/ANSI 61. The updated values are expected to be balloted in the summer of 2017.

A question was raised on whether the EPA IRIS system was being disbanded. K. Cox stated that he did not know, and noted that while the Health Advisory Board (HAB) does utilize those numbers, it’s just one source. The committee can always develop its own risk assessment.

**F. NSF/ANSI 61 Annex A update**

**Discussion:** K. Licko and K. Cox reviewed the current toxicological review process and evaluation procedures for risk assessments under Annex A of NSF/ANSI 60 and 61. K. Licko explained that the HAB and JPRSC have applied updated risk assessments and are meeting current agency guidelines, but that this is not currently reflected in Annex A. This effort will bring Annex A requirements up to these current guidelines.

It was confirmed that the EPA changed the daily water intake for an adult. From new data collected, it was revised in the 2011 handbook to 2.4 liters of water per day. In addition, the average body weight of an adult was increased to 80 kg.

**G. DWTU scope (DWTU-2017-7)**

**Motion:** Form a task to review the current scopes of the DWTU standards and recommend any applicable revisions. T. Palkon motioned; A. Anderson seconded.

**Discussion:** T. Palkon reviewed common statements with regards to the scope of the DWTU standards and the different product types/technologies that are currently covered.
under the standard. He recommended that the JC review the intent of the current scopes, and decide whether there should be any changes or restrictions on certain types of products.

B. Powitz agreed that a task group could be formed but noted that some of the technologies mentioned in the issue paper have never been under the scope of the DWTUs (e.g., air to water products). He referred to the value of protocol development for different technologies that don’t fall under the scope of the DWTU standards. T. Palkon noted that there are several participating standards developers that can develop protocols, but it doesn’t change the fact that the DWTU standards need to be reviewed. He stated his opinion that the scopes are currently open. R. Herman disagreed, and stated that the scope applies limits on what can be certified under the standard. He referred to the requirement that the DWTU standards are to be used with a microbiologically safe water supply (e.g., NSF/ANSI 42, 53, 58). He noted that NSF/ANSI 55 is the exception because it is a microbiological standard. If someone decides to take a product and use it on something other than a municipal system and make claims outside of its intended use, that is a certification issue. T. Palkon stated that he is seeing such products being certified.

There were differing opinions on whether DWTU terms such as “microbiologically safe” are well-defined under NSF/ANSI 330. T. Palkon stated that he believed that some of these other products could be included under the definition. R. Regunathan indicated that the NSF/ANSI 330 task group spent a considerable amount of time clarifying these DWTU terms, and that he believed that “microbiologically safe” is well-defined. R. Herman agreed. S. Ver Strat stated that the scopes of the standards are based on known technologies, and should be kept in those broad terms. T. Palkon reiterated that he was not suggesting to restrict or broaden the scope, just to reexamine the intent of the current scopes, and decide whether there should be any changes. R. Regunathan stated his belief that the DWTU scopes are already well-defined. He added that a system with multiple technologies is addressed in the standards by requiring that it must comply with of all applicable standards.

The group discussed specific examples of products of concern. T. Palkon referred to a product using UV, filtration, and ozone, but is unique in that it makes water from the air. R. Herman noted that air is not a microbiologically safe water source, and is known to have bacteria in it. Therefore, it would automatically be excluded from NSF/ANSI 53. T. Palkon disagreed.

**Vote:** 21 in favor; 0 opposed; 9 abstentions (A. Patil, R. Herman, F. Brigano, A. Fenwick, S. Ver Strat, B. Laing, H. Patel, T. Sorg)

**Motion passed.**

**TG:** A. Anderson; T. Palkon; B. Hatton; E. Leung; E. Valentine; K. Seeger

**VI NSF/ANSI 42**

**A. TOC reduction claim (DWTU-2017-5)**

**Motion:** Reconvene the NSF 42 Taste and Odor Task Group. M. Nakayama motioned; T. Palkon seconded.

**Amended Motion:** Include not only MIB and geosmin (from the original charge), but TOC in general. M. Nakayama motioned; G. Hatch seconded.

**Discussion:** M. Nakayama reported that when TOC is high it has an unappealing aesthetic effect (i.e., musty taste). This a problem in Japan during the summer, when natural events such as algae blooms occur. She shared the results of the 1985 Oishii-Mizu research
project, which showed that when levels of TOC increased from the targeted 1 mg/L or less to a TOC level of 2-3 mg/L, a bitter, musty taste is detected by consumers. Since this is not a health-related issue, the public water works facilities won’t investigate to decrease TOC, but simply announce to consumers that the musty taste will subside when the weather is cooler. M. Nakayama stated that DWTUs can address this and recommended that the JC consider the inclusion of a TOC reduction claim in the standards.

R. Herman noted that the current taste and odor claim under NSF/ANSI 42 is based on chlorine. A task group was formed a few years ago to consider a claim based on geosmin and MIB. G. Hatch (chair of the task group) explained that after some initial research, the effort stopped because there was not much interest from manufacturers and the analytical method was expensive. The task group tried to determine challenge levels based on a taste test panel, but the results were inconclusive. G. Hatch agreed that if there is interest then the JC should consider this again. He suggested that perhaps the activated carbon filters currently in the marketplace may remove enough of these contaminants to satisfy consumers. T. Yerkes stated that in the last couple of years there has been much interest in the Asian market, including Japan and Korea, and agreed that the committee should consider this if possible.

The group discussed whether specific contaminants should be defined for TOC. T. Palkon stated that a consumer is not going to look for geosmin specifically. He reiterated that there is already a taste and odor claim for chlorine. S. Ver Strat stated that geosmin and MIB are known to consumers in Asia, and he agreed that the task group should be reestablished. F. Brigano agreed that specific contaminants should be defined for TOC. It was suggested that instead of a general TOC claim, however, that perhaps the term "organic taste and odor" be used. It was noted that since there are no known health effects it would be covered under NSF/ANSI 42. It was noted that manufacturers were also concerned with the capacity their products could achieve.

The question was raised on whether a standard already exists with the Japan Water Purification Agency (JWPA). T. Yerkes explained that it is different in that they don’t make claims under the standard the way a third party certifier would do for ANSI standards.

Vote: All in favor.

Motion passed.

G. Hatch (chair); C. Klevens; M. Nakayama; T. Spoden; R. Reguwanthan; A. Fenwick; J. McDonald; S. Murphy; S. Lee; B. Tallon; K. Sauerbier

VII NSF/ANSI 53

A. Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) (DWTU-2017-2)

Motion: Form a task group to incorporate NSF protocol P473 and the work completed by WQA on PFOS and PFOA reduction into NSF/ANSI 53 and 58. A. Patil motioned; F. Brigano seconded.

Discussion: A. Patil provided a brief background on the presence of PFOS and PFOA in the environment. These compounds, which were originally used in the manufacturing of nonstick materials, are now found everywhere because of their resistance to degradation. These compounds are suspected carcinogens, and in 2016 the USEPA issued a lifetime health advisory value for PFOS and PFOA in drinking water. Under these guidelines, utilities are required to notify consumers when these contaminants exceed 70 ppt. As of May 2016, about 1% of public water systems have reported a combined PFOS and PFOA level above
70 ppt. A. Patil reported that WQA worked on PFOA and PFOS removal using RO systems with the state of Minnesota 10 years ago. In 2016, NSF also developed a protocol (NSF P473) for PFOS and PFOA removal by carbon and RO. A. Patil recommended that the JC form a task group to consider the inclusion of this work into NSF/ANSI 53 and 58.

**Vote:** All in favor.

**Motion passed.**

A Patil (chair); A. Anderson; T. Spoden; A. Fenwick; B. Tallon; S. Ver Strat; G. Hatch; R. Regunathan; R. Herman; F. Lemieux; E. Valentine; M. Unger.

### B. Microcystin reduction claim (DWTU-2017-10)

**Motion:** Ballot proposed language for microcystin reduction claim under NSF/ANSI 53. F. Lemieux motioned; F. Brigano seconded.

**Discussion:** F. Lemieux summarized the work of the task group to date, which has included the review of NSF Protocol 477 and consideration of water quality issues (TOC, source of NOM), influent/effluent levels, mixture of microcystins to be used, and the challenges of obtaining pure chemical for testing of devices. In 2016, a straw ballot was submitted to the JC for feedback. The ballot received 74% affirmative votes with 66% of the ballots returned. Comments from the negative ballots included the characterization of adsorbability based on polarities of available microcystins, the need to set an upper limit on TOC, allowance of TOC to be adjusted with chemicals if needed, and the request for additional validation testing from other labs. These comments have been addressed and some modification of the language is being made as a result. There was also a comment that the standard specify one supplier of microcystins to ensure reliable and comparable results. F. Lemieux explained, however, that per ANSI policies it is not permissible to include commercial terms and conditions, such as a specific manufacturer or service within the standard. F. Lemieux noted that a comment was also received on the need for preloading the system with TOC. She explained that since the units are being conditioned with the contaminant water, the task group agreed that additional preloading of the filter was not necessary.

It was noted that TOC has a strong effect on the absorptive capacity of activated carbon, and that elevated natural organic matter will conservatively evaluate performance. A natural NOM source must be used because synthetic chemical could affect the natural adsorption of microcystins and give inaccurate performance results.

The question was raised on whether the task group has considered using chloroform as a surrogate. F. Lemieux stated that she was not aware if anyone has looked at it, and not certain that it would give the same result. Validation testing would need to be done first.

R. Herman explained that as a supplement, chlorinated tannic acid can be used to bring the TOC up to the specified range of between 2-3 ppm.

It was clarified that the source of microcystins could potentially have all of those congeners listed in the protocol, though LR and LA are the most typical. R. Herman noted that the LA congener is less retained on carbon, so it is the most conservative. However, it would be too difficult and costly to purify and use a single congener.

**Vote:** All in favor

**Motion passed.**
VIII NSF/ANSI 58

A. Performance protocol length (DWTU-2017-4)

**Motion:** No motion. R. Regunathan will lead a literature review and report back to the JC.

**Discussion:** R. Regunathan stated that RO is becoming a very popular product to use, especially in developing countries (75% of DWTU products in China, India are RO). It is an indiscriminate barrier that takes care of everything. R. Regunathan stated that he has been asked about the shortness of the 8 day test under NSF/ANSI 58, and whether this shows that a system is really achieving steady performance. He noted that he did not personally have much involvement with the development of NSF/ANSI 58, and therefore does not know the rationale behind the length of the test. He suggested that if any validation was done, it be published to provide a higher level of confidence that the test is effective. R. Regunathan requested that NSF look back in the historical records for the justification of this test.

R. Herman gave a brief summary on the background of the protocol. He explained that the 8 day test had nothing to do with longevity, but rather testing the ROs under different scenarios over time (e.g., effect of creep, full tank draws after stagnation, different use scenarios, etc.) The data is then averaged. For longevity, there are two requirements. Either the system must have a TDS monitor, or the manufacturer must provide testing services to monitor a device on a periodic basis (for health effects). R. Regunathan noted that an annual monitoring program only applies to nitrate/nitrite.

R. Regunathan suggested that a short validation test could be done to confirm a system’s performance. For example, operate a system for two weeks and test, then test again after four weeks. If the unit is still effective then that is sufficient. S. Murphy stated that there is evidence in field studies (e.g., state of Minnesota) that ROs work well over time. He added that he does support the initiative to get some additional science behind it, however. G. Hatch agreed and stated that from his previous experience with RO manufacturing, it is common for manufacturers to have tested their systems and then for dealers to do additional testing. He also referred to T. Sorg’s previous field testing of ROs.

R. Herman clarified that under NSF/ANSI 58, all chemical reduction claims have a requirement that there be follow-up monitoring. R. Regunathan stated that in reality, this is not practiced.

F. Brigano recalled that Culligan had tested systems for over a year. He stated that he would reach out to some manufacturers and attempt to obtain some information. H. Patel also referred to a long term study on PFOS using RO that would show effective performance. J. Lalonde offered to provide information from military field studies. She noted that that challenge water is not controlled in this case. E. Leung reminded the group that POU systems are different than large scale applications, however. Home products have different use patterns.

R. Regunathan expressed his disappointment at the lack of manufacturers willing to participate on the RO task group work. He reported that no one provided feedback on his proposal on the microcystin protocol. He suggested that perhaps the JC needs more RO representation. F. Brigano suggested that an initial literature review be done.

IX Informational/Task Group Updates

A. Nitrosamines
**Discussion:** A. Patil reviewed the charge of the task group that was formed last year to consider a nitrosamine reduction claim. He reviewed the results of the straw ballot that was submitted to the JC and explained how the influent and effluent levels were chosen. He stated that most of the comments received related to these values. A. Patil reported that the task group is discussing pre-validation work to determine feasibility of testing, creating a stable challenge water, and challenges with contamination.

**B. Higher lead influent**

**Discussion:** A. Patil reported that this task group was formed to consider an optional high influent level for lead under NSF/ANSI 53, 58, and 62. This was as a result of situation created in Flint MI, where lead concentrations much higher than 150 ppb, up to 1000 ppb, were found. Currently most of these devices are certified under a lead challenge of 150 ppb. These higher lead concentrations mostly occurred in spikes rather than as a continuous high level. An optional protocol was developed where the drinking water device was challenged to several spikes of 1000 ppb concurrent with NSF/ANSI 53 certification. However there is still some uncertainty regarding the speciation of this 1000 ppb spike influent. Some testing will be suggested to obtain a better understanding of this spike influent.

**C. Uranium**

**Discussion:** T. Sorg reported that the task group has determined that RO systems are the easiest and most straightforward technology to address first. They are recommending two influent challenges just like arsenic, based on what is being seen in the field. T. Sorg reported that the task group’s main challenge is obtaining a uranium standard to use. He asked the JC for assistance to identify a source of uranium.

T. Sorg explained that the group has agreed to use the general TDS test water under NSF/ANSI 58. The next step will be to undergo validation with the labs. NSF is willing to run the test if we can get a source of uranium. The question was raised on whether a surrogate could be used. R. Herman explained that the challenge is that we have a neutral species at a neutral pH. G. Hatch stated that most neutral molecules go right through an RO, and suggested that perhaps a second pH could be tested (e.g., pH 6.5).

**D. Informational annex/ regulator’s guide**

**Discussion:** B. Powitz provided a brief history of the issue and the task group’s progress to date. He noted that there are several barriers for getting the DWTU standards accepted by the regulatory community, including a lack of O & M information. The group has been charged with the task of developing an informational annex/regulator’s guide in the DWTU standards that includes information on: appropriate technologies for the removal of contaminants of public health importance; selection of DWTU component(s) and system configuration; proper installation; operations and maintenance; start-up and periodic monitoring. A table of contents outlining the information to be included in the annex was drafted by Duncan Ellison and was discussed at the regulator’s forum. Additional feedback is currently being gathered.

**E. 244-3 Sub-Task Group Chair Report**

Informational paper submitted.

**F. Task Group on Shower Filtration Chair Report**

Informational paper submitted.
G. Task Group on UV Disinfection Chair Report

Informational paper submitted.

X Committee Administrative Issues

A. The next meeting date was tentatively set for Wednesday, May 9, 2018.

B. R. Herman motioned to adjourn the meeting. R. Regunathan seconded. All were in favor and the meeting was adjourned.
Meeting Participants

Joint Committee Members

Chairperson, Bob Powitz
Vice Chairperson, Frank Brigano (KX Technologies)
Anita Anderson (MN Dept. of Health)
Margaret Bicking (Ecowater Systems)
T. Duncan Ellison (Consultant, Cheffell Associates) – via phone
Andrew Fenwick (Multi-Pure)
Rob Herman (NSF)
Jeff Kempic (USEPA) – via phone
Cynthia Klevens (NH Dept. of Environmental Services)
Frank Kurtz (AWWA)
George Lai (Ontario Ministry of the Environment)
Bruce Laing (VIQUA)
Janick Lalonde (National Defense & Canadian Forces)
Sun Yong Lee (Coway)
France Lemieux (Health Canada)
Eugene Leung (CA Dept. of Health)
Art Lunquist (USAPHC) – via phone
Philip McCrory (Consultant)
Shannon Murphy (TST Water)
Mikiko Nakayama (Mitsubishi Chemical Cleansui Corp.)
Tom Palkon (IAPMO)
Tom Spoden (WQA)
Hemang Patel (Cuno, a 3M Company)
Arvind Patil (Ricura)
David Riggs (NEHA)
Knut Sauerbier (Brita GmBH) – via phone
Klaus Seeger (Seeger & Associates - Environmental Public Health Services)
Mikail Starostin (Green Mountain Coffee Roasters, Inc.)
Tom Sorg (USEPA)
Steve Ver Strat (Access Business Group)

Non-voting Member Liaisons

Gary Hatch (Hatch Global Consulting)
Regu Regunathan (Regunathan & Assoc.)

Proxies

Brook Hatton (CSA) – proxy for F. DiFolco

Joint Committee Members not in attendance

William Anderson (University of Waterloo)
Franco DiFolco (CSA)
Shaobin Lin (Tianjin Centers for Disease Control and Prevention)
Anish Mehta (The Coca-Cola Company)

Observers

Cyndi Benson (Harmsco)
Karen Carter (Cuno, a 3M Company)
Peter Cook (KX Technologies)
Rick Cook (Culligan)
Marty Kleven (Miltec)
Kristin Licko (WQA)
Andrew Lombardo (Aquaguidance) – via phone
Jonathan McDonald (Clorox Services Co.)
Matt Morrison (Calgon Carbon Corp.)
Donna Prete (Cuno, a 3M Company)
Ryan Prince (GE Appliances)
Ed Robakowski (Kinetico) – via phone
Colby Smith (Calgon Carbon Corp.)
Dale Squier (Antunes)
Becky Tallon (A.O. Smith)
Walter Vance (Kinetico, Inc.)
David Wassilak (Amwray)
Dean Weinberger (Miltec)
Mark Unger (Paragon)

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Page 12 of 12