Task Group on Food Equipment Fabrication
Teleconference Meeting Summary
December 4, 2018

Participating Members:
Jim Brady (Wawa, Inc.)     Mike Kohler (NSF International)
Willard Sickles (InterMetro Industries Corp)     Gary Maxon (The Delfield Co)
Michael Perez (Baring Industries)     Bob Kuhn (Carlisle)
Burl Finkelstein (Kason Industries)     Tony Gagliardi (Consultant – PH)
Millicent Crenshaw (Cambro)

Absent Members:
Girvin Liggans (Food and Drug Administration)     Dipak Negandhi (Consultant)
Gilad Gabby (MDPH/BEH Food Protection Agency)     Pierre Clemons (Cambro)
Swati Bhatt (Los Angeles County)     Tiffany Curry (Franke Contract Group)
Theodore Barber (Theodore Barber & Company)     Tom McNeil (U.S. Army)

Participating observers:
Al Rose (NSF International)     Jeff Burnett (Perlick)
Steve Combs (Everidge)     Jim Godiska (Follett Corp.)
Jon Murray (Structural Concepts Corporation)

Supplemental Materials Referenced
1) Agenda - FEF - TG - 2018-12-04.pdf
2) FE-2018-17 - Glass and Ceramic Dinnerware.pdf
3) FE-2018-14 - IPC changed to CIP.pdf
4) IPC - CIP Draft.docx
5) JCFE Meeting Summary - 2018-08-22 - Standard 2 Excerpts.pdf
7) 170i25r1 - Dinnerware versus Tableware - description & straw ballot.pdf
8) 170i25r1 - Dinnerware versus Tableware - COMMENTS.pdf

Discussion
J.Brady welcomed everyone and called the meeting to order. A.Rose read the anti-trust statement and took attendance. Nine of the 17 voting members were present (53%) which represented a quorum.

J.Brady went over agenda briefly, stating that B.Glynn was unavailable, and suggested the agenda order be changed, but not the items per se, specifically that the issue of IPC changed to CIP be discussed first, with Tableware versus Dinnerware second, and if time permits have a short discussion regarding the issue of Ceramic and Glass Dinnerware.

B.Sickles then opened the floor regarding the previous meeting summary

Motion, B.Sickles: Accept previous meeting summary
Second: M.Perez
Discussion: None
Vote: All in favor
**Topic #1 – IPC changed to CIP – FE-2018-14**

J.Brady briefed the group regarding the issue paper submittal and initial discussion during the JC F2F meeting, and M.Kohler confirmed where the efforts began with the Conference for Food Protection. He added that a Clean In Place committee was formed there, with the goal being to compare the Food Code with NSF Standards. The final summary was that terminology differences existed between the Food Code and NSF Standards and the suggestion was put forth that the term In Place Cleaning should be updated and made consistent with the term Clean In Place.

The group was then presented M.Kohler’s initial draft thoughts for comments, going over section by section, starting with the definition:

**NSF/ANSI 170 Edits**

3.114 **CIP** in-place cleaning: A method of cleaning and sanitizing equipment surfaces in their assembled form in place by mechanically circulating or passing a detergent solution, water rinse, and sanitizing solution onto or over the surfaces. Equipment designed for manual cleaning such as band saws, slicers, or mixers are not intended for CIP.

M.Kohler confirmed the last sentence was pulled directly from the FDA food code, which was one of the asks coming from the Conference for Food Protection.

J.Brady opened the floor for comments.

M.Perez suggested the definition should include both the full term and acronym, not just “CIP”. M.Kohler indicated that was his initial thought as well, but after speaking with Girvin who pointed out that the FDA Food Code does not actually use the phrase Clean in Place, only the term CIP, he kept only the acronym. M.Kohler added that within the definition it does actually spell out what the term is meant to describe.

M.Perez asked if there is a reason we don’t simply use the exact food code definition, and B.Sickles read off the FDA code definition to the group:

**CIP.**

1. "CIP" means cleaned in place by the circulation or flowing by mechanical means through a piping system of a detergent solution, water rinse, and SANITIZING solution onto or over EQUIPMENT surfaces that require cleaning, such as the method used, in part, to clean and SANITIZE a frozen dessert machine.

2. "CIP" does not include the cleaning of EQUIPMENT such as band saws, slicers, or mixers that are subjected to in-place manual cleaning without the use of a CIP system.

M.Perez indicated that in Standard 170, there are no definitions that are simply acronyms, so this would be setting a precedent.
There was a question and brief discussion about where the definition would reside, and M.Kohler confirmed like all definitions, it will reside in Standard 170, with the IPC language in each Standard being changed to CIP. M.Kohler then explained the fundamental difference between In Place Cleaning and Clean In Place, which he also explained during the F2F meeting (and can be found in that summary). The group ultimately agreed spelling out the entire term would not harm and the would look like this:

3.114 **Clean In Place (CIP) in-place cleaning:** A method of cleaning and sanitizing equipment surfaces in their assembled form in place by mechanically circulating or passing a detergent solution, water rinse, and sanitizing solution onto or over the surfaces. Equipment designed for manual cleaning such as band saws, slicers, or mixers are not intended for CIP.

J.Brady asked if there were any other comments, the only other being the addition of a rationale statement, and the following motion was made:

**Motion, J.Brady:** The proposed wording, with a rationale statement to be submitted to TG as straw ballot  
**Second:** T.Gagliardi  
**Discussion:** J.Brady to write up rationale, and confirm wording with M.Kohler  
**Vote:** all in favor, no opposed, no abstention  
**Motion:** Carries

The group then proceeded through the various sections containing the term IPC in Standard 2.

**Section 1**

5.1.3 Food zones shall be readily accessible and easily cleanable or shall be designed for in-place cleaning (IPC) as a CIP system when a readily accessible design is not feasible.

J.Brady opened the floor for comments

M.Perez suggested that like the term is spelled out within the definition, it is typical for these types of terms to also be spelled out the first time they are used in a document, then follow up with the acronym throughout the rest of the document, such that:

5.1.3 Food zones shall be readily accessible and easily cleanable or shall be designed for in-place cleaning (IPC) as a Clean In Place (CIP) system when a readily accessible design is not feasible.

M.Kohler added that it’s fine if the group would like to spell it out, but wanted to confirm that the idea was simply to match the Food Code, which also does NOT include the word ‘system’.

The group then discussed 2 approaches, and were able to comment on either the **Yellow** or **Grey**:

5.1.3 Food zones shall be readily accessible and easily cleanable or shall be designed for Clean In Place (CIP) for in-place cleaning (IPC) as a Clean In Place (CIP) system when a readily accessible design is not feasible.
Section 2

5.1.4 Food zones for which IPC CIP is intended shall be designed and manufactured so that cleaning and sanitizing solutions may be circulated or passed throughout the fixed system. The design shall ensure that cleaning and sanitizing solutions contact all food contact surfaces. The system shall be self-draining or capable of being completely evacuated. Equipment and appurtenances designed for IPC CIP shall have a section of the cleaned area accessible for inspection or shall provide for other acceptable inspection methods. The manufacturer shall provide written instructions for the cleaning and sanitizing of all food zone surfaces for which IPC CIP is intended. The type and concentration of sanitizing agent recommended in the instructions by the manufacturer shall comply with 40 CFR §180.940.

J.Brady opened the floor for comments; there were none.

Section 3

5.52 Food dispensing pumps
The entire pump assembly shall be easily cleanable. The assembly includes all valves and springs. Food dispensing pumps designed as a closed system may be cleaned by an IPC CIP method.

J.Brady opened the floor for comments; there were none.

Section 4

6.1.1 Performance requirement
Cleaning and sanitization procedures recommended by the manufacturer shall effectively clean and sanitize food contact surfaces.

NOTE — This requirement applies to manual cleaning and sanitizing procedures and to IPC and sanitizing procedures recommended by the manufacturer.

M.Kohler added that this NOTE should be removed because it causes more confusion than value being added. Although it doesn’t change versus IPC, it’s simply confusing. The NOTE implies that in some cases there are pieces of equipment that include CIP pieces like tubing, nozzles, etc., and testing is completed on the nozzles as well. The new definition for CIP includes this description so there is no need for the NOTE.

J.Brady opened the floor for comments, asking if there were any objections to removing the NOTE; there were none.
Section 5

6.1.2.2 The equipment shall be operated so that food contact surfaces are exposed to the E. coli suspension. The equipment shall then be cleaned in place according to the manufacturer's instructions and refilled with sterile buffered dilution water (SBDW). The SBDW shall be dispensed and five 100 mL samples shall be collected at intervals from the start of the dispensing until the unit is empty. When adequate sample volumes cannot be realized, additional SBDW shall be added accordingly. The equipment shall then be operated so that food contact surfaces intended for IPC CIP are exposed to the SBDW. Sufficient SBDW shall then be dispensed. The challenge organisms present in each sample shall be collected and enumerated using the Standard Total Coliform Membrane Filter Procedure in accordance with APHA's Standard Methods for the Examination of Water and Wastewater.

Section 6

Annex A
(normative)

Methods for preparing and analyzing in-place cleaning (IPC) CIP bacteria surrogate

J.Brady opened the floor for comments

M.Perez suggested this would also be a good location to include the full phrase. The generally agreed, and created the following:

Methods for preparing and analyzing in-place cleaning (IPC) Clean In Place (CIP) bacteria surrogate

A.1 Summary

E. coli is used as the challenge organism for the IPC CIP test. Presented in this Annex are the methods used for suspension preparation, controls, and analysis of the challenge organism.

J.Brady opened the floor for comments; there were none.

With all the sections discussed, J.Brady suggested this be sent to the TG as a straw ballot, and M.Kohler agreed to add rationale statements.

Motion, T.Gagliardi: Send updated language to TG as straw ballot, including rationale statements.
Second: B.Sickles
Discussion: None
Vote: all in favor, no opposed, no abstention
Motion: Carries
J. Brady asked if there were any other comments on this topic; there were none so he moved on to the next agenda item.

**Topic #2 – Dinnerware versus Tableware – FE-2018-18**

J. Brady indicated that although the issue proponent was not available for today’s call, this issue has already been sent to the TG as a straw ballot, with comments to be discussed:

3.56 dinnerware tableware: Items for table use such as plates, bowls, saucers, cups, tumblers, compartmentalized trays, and covers that may be in direct contact with food.

<table>
<thead>
<tr>
<th>Submitter</th>
<th>Vote</th>
<th>Comment, Proposal, and Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negandhi, PE, Dipak</td>
<td>Yes</td>
<td>Based on Protocol 392, the definition for 'Tableware' should include flatware such as spoons, knives, forks, chop sticks etc.</td>
</tr>
<tr>
<td>J. Brady, Wawa, Inc.</td>
<td>Yes</td>
<td>I added an additional suggestion to the definition that may be out of scope of this issue. See attachment. Tableware Definition Considerations.pdf</td>
</tr>
<tr>
<td>Tom McNeil</td>
<td>Yes</td>
<td>Team. There is a difference between tableware and flatware even though we use them as synonyms. <a href="https://wikidiff.com/tableware/flatware">https://wikidiff.com/tableware/flatware</a></td>
</tr>
</tbody>
</table>

J. Brady explained his comments were based on NSF Protocol 392, as well as the FDA Food Code definition:

**P392 Definition**

2.11. Tableware dishes, plates, glasses, flatware, and other articles used to directly and indirectly consume food

**Food Code Definition**

"Tableware" means eating, drinking, and serving UTENSILS for table use such as flatware including forks, knives, and spoons; hollowware including bowls, cups, serving dishes, and tumblers; and plates.

Thus adding the terms flatware, dishes makes sense:

**Currently Proposed Standard 170 Definition**
3.52 dinnerware | tableware: Items for table use such as plates, bowls, saucers, cups, tumblers, compartmentalized trays, and covers that may be in direct contact with food.

New Proposal
3.52 dinnerware | tableware: Items for table use such as flatware, dishes, plates, bowls, saucers, cups, tumblers, compartmentalized trays, and covers that may be in direct contact with food.

Question was asked about where the term dinnerware is used, and M.Kohler confirmed within the scope of this TG and JC, the term is only used in Standard 2. J.Brady then read off the only times where term is used in Standard 2:

1.2 Scope
Equipment covered by this Standard includes, but is not limited to, bakery, cafeteria, kitchen, and pantry units and other food handling and processing equipment such as tables and components, counters, dinnerware, hoods, shelves and sinks.

5.61 Identification mark
Dinnerware products shall have a permanent marking or an identification plate that denotes the manufacturer's name and product model number. If the manufacturer has more than one production location for the dinnerware product, then the production location shall be identified on the marking or identification plate.

J.Brady opened the floor for comments asking which definition is preferred.

M.Perez indicated if the intent is to harmonize with the Food Code, it would make sense to go with the second definition as it matches. B.Sickles agreed adding that as long as there is no redundancy in Standard 170, then the second definition would be preferred.

Motion, M.Perez: Send second definition to straw ballot with this TG.
Second: T.Gagliardi
Discussion: None
Vote: all in favor, no opposed, no abstention
Motion: Carries

J.Brady asked if there were any other comments on this topic; there were none so he moved on to the next agenda item.

Topic #3 – Glass and Ceramic Dinnerware – FE-2018-17
J.Brady indicated that the issue proponent was also not available for this topic, and there is only a few minutes left today, so he just wanted to recap the discussion during the JC F2F to prepare thoughts for the next teleconference. To this end he read off the discussion during the meeting, which included a recitation of the meeting summary of a related topic during the 2000 F2F.
From 2018:

**Motion by T.Johnson:** Send this to the TG on Food Equipment Fabrication  
**Second:** S. Schaefer  
**Discussion:** T.Johnson asked if there currently is an impact test for dinnerware, and if not should one be created. B.Glynn explained what they do at Starbucks, and the thought for developing specific methods for testing in Standard 2. The problem now is that there is no consistent method so we've cobbled together various methods used elsewhere. B.Corrao asked how this relates to health and safety, and B.Glynn said there is a potential for breakage close to ice bins, so dinnerware needs to be durable. M.Kohler confirmed there currently are no ceramic glassware standards in the FE suite, however some time back he put in an Issue Paper to include glassware. At that time the JC refused. J.Brady called up and read off the IP submitted by M.Kohler in 2000.

From 2000:

**Standard 36—Dinnerware**

Mike Kohler (NSF International) gave an overview of the scope of the current Standard 36. There is a note in the Standard regarding the exclusion of glassware. He asked the Joint Committee if the scope should be expanded to include chinaware and glassware.

M. Elliot thought there might be a concern about the glazes used in making the chinaware and glassware. K. Northcutt asked if flatware is or could be included in Standard 36 as well. M. Whybark replied that flatware is covered by Standard 2. Mr. Perez then asked why glassware and chinaware were excluded from Standard 36. To which M. Whybark replied that those items had been excluded because they could not pass the impact test. M. Kohler added that there is now glassware available which is capable of driving nails into two by fours. M. Schwartz questioned why regulators have not expressed a need for this. J. Hipp expressed concern that if we included these items to be covered by that standard that only new glassware might be able to meet the standard. Mr. Schwartz viewed it as an effort from manufacturers to try to get the NSF Mark for marketing purposes.

Jim Brady stated that he would feel safer if glassware had some type of testing. **Mr. Schwartz made a motion that NSF should stay away from adding glassware and chinaware to Standard 36 unless there is a request from the regulatory sector to add it to the standard. The motion carried.** Glassware and chinaware will not be added to Standard 36 unless a need from the regulatory sector is later expressed.

T.Jumalon then asked what the purpose would be for adding this to Standard 2. B.Glynn said she is hearing from manufacturers that NSF does not require testing, and it would be easier for her as a user if there was somewhere to point to for testing. M.Samarya-Timm indicated that as a regulator and user of the ceramic cups, she sees value in updating the performance testing to include this, adding it would set the bar above and beyond the food code. T.Jumalon said he doesn't see how putting something in a standard gives any power to regulators. The ownership needs to be placed on the users. B.Glynn provided an example of lead in dishware and how some years back that was not surprising to find lead in wine glasses. J.Murray suggested this sounds like a quality measurement, not public safety. J.Leonard.
Vote: Twenty-four in favor, Three Opposed, Zero Abstentions
Motion: Carries

With 5 minutes left, J.Brady suggested that if there is any other information that would help for the next call that members would be best served sharing this prior to the call scheduled for February.

M.Kohler reminded the group that the discussion at the F2F included reference to Standard 36, which is no longer a Standard. As it stands today, there is nothing specific that prohibits items from being certified to Standard 2. If the objects are made of glass there are requirements for safety glass elsewhere, thus there is nothing that would exclude it like was excluded in Standard 36. So this begs the question, should we develop a performance test for these items.

J.Brady asked the group if it made sense to take this to the TG to illicit questions prior to the next call, to which M.Kohler said there is no language to comment against, and M.PEREZ suggested the topic be deferred until the issue proponent is available, but in the meantime ask the proponent how the products are currently being tested.

J.Brady asked if there were any other comments on this topic; there were none and the meeting adjourned.

**Action Items**

1. Send revised CIP definition including rationale statement to Straw Ballot with this TG
2. Send revised CIP replacing IPC within the various sections of Standard 2 as discussed during this meeting including rationale statements, to Straw Ballot with this TG
3. Send revised Tableware definition as discussed during this meeting to Straw Ballot with this TG