Task Group on Food Shields
Teleconference Meeting Summary
November 14, 2012

Participating members:
Michael Perez (Baring Industries)
Amy Cashen (Delfield)
Chris Cummings (Premier Brass)
Mike Kohler (NSF)
Pep Matus (Versa-Guard)
Andrew Padden (BSI)
John Scanlon (Hatco)

Absent members:
Anthony Carotenuto (Navy and Marine Corps Public Health Center)
Tony Gagliardi (Consultant – Public Health)
Randy Lines (Duke Manufacturing)
Thomas McNeil (U.S. Army)
George Zawacki (CAD Solutions Groups, Inc. (CGS)

Secretariat:
Lorna Badman (NSF)

Participating observers:
Jeff Differt (Hatco)
Tom Johnson (Johnson Diversified Products Inc.)
Dave Van Otterloo (BSI)

Supplemental Materials Referenced
2i20r1; 11-08-2012
2i20r1 Food Shield Figures; 11-08-2012
2i20r1 Proposed Section 5.35.11; 10-22-2012
Zac Heisler 10-22-2012 e-mail

Action Items:

1. M. Perez will update the draft per today discussion.
2. M. Perez will convert the anthropometric data for children metrics to inches in chart form.

Discussion

L. Badman read the antitrust statement and took the attendance. M. Perez indicated there had been a change in membership. The following people were upgrade to member status: Pep Matus; Andrew Padden; and Chris Cummings.

M. Perez discussed the results of the straw ballots. In the 1st straw ballot, the TG voted to send the current draft to the JCFE for ballot. In preparation for balloting, M. Perez has updated the draft and food shield figures A through F. To ensure the updated draft and figures are acceptable to the TG, the draft will be reviewed one final time beginning with today's teleconference. In the 2nd straw ballot, the TG agreed to use the anthropometric data for children. M. Perez will convert the metrics to inches in chart form and compile the data into reach data according to the formulas agreed to in the straw ballot.

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Z. Heisler 10-22-2012 e-mail

Prior to this teleconference, M. Perez e-mailed Z. Heisler regarding the amount of time required to rethermalize the food product. The following response was received:

> That depends to some degree on what type of hotdog and what cook setting the operator selects. One other item to note, typically the stores thaw the products in advance to decrease the amount of time to reheat the product.
>
> All of that aside, I used our digital grill on the middle cook setting (keep in mind I can increase the temperature and drastically reduce the time, but that is not normal operation). The cook time is a default of 40mins. The cook time for the ¼ pound all beef hot dogs to reach 150°F was 25 minutes. At 30 minutes the internal temp was above 160°F. At the end of the cook cycle, the internal temp was 170-175°F.

2i20r1 Proposed Section 5.35.11; 10-22-2012

Proposed section 5.35.11 was updated according to the October 17, 2012 teleconference as follows:

5.35.11 Food shields for use on ~~hot dog~~ roller grills

~~**5.35.11.1** Food shields for use on hot dog roller grills are intended to protect against dirt and debris from falling on the food.~~

5.35.11.2~~2~~1 Food shields for use on ~~hot dog~~ roller grills are exempt from 5.35.1.3~~,~~ ~~and~~ 5.35.1.6 and 5.35.2.

5.35.11.3~~2~~ The food shield shall completely cover the cooking surface and shall extend a minimum of 1.5 in (38 mm) beyond the cooking surface on all sides.

5.35.11.4~~3~~ The food shield shall be no higher than 18 in (457 mm) above the cooking surface.

Rationale: New section added to address special requirements for roller grill type equipment commonly found in C-store, self-serve applications. When placed on a countertop, the heated rollers are typically between 42" and 54" above the floor making current self-serve food shield requirements ineffective. Because the surface of the food is maintained at a temperature above which micobial organisms can survive, the intent of these requirements is to protect food from dirt and debris falling on the food.

The rethermalization timeline was discussed in detail during the last teleconference and if the food was at temperature when sold. The TG agreed this was an operational issue and not a food shield issue. The TG agreed with the above modifications. This proposed modification will be added to draft that will be sent to the ballot.

2i20r1; 11-08-2012

In preparation for balloting by the JCFE, The TG began a final review of draft 2i20r1. Excerpts from the draft below are based on teleconference discussions since May 2011. The discussion notes are included under the text. Where applicable, modifications have been incorporated into the draft.

Section 5.35.1 has been added to allow the addition of other general requirements without having to renumber all sections following.

5.35 Food shields

5.35.1 General requirements

Rationale: General requirements section created so specific use food shield section numbers 5.35.2 through 5.35.10 do not need to be changed each time a new general requirement is added.

~~Food shields covered under section 5.35 shall conform to the requirements in 5.35.1 through 5.35.6.~~

Portable and non-portable food shields shall conform to the general requirements in 5.35.1 and to the applicable specific use requirements of 5.35.2 through ~~5.35.7~~ 5.35.11.

Rationale: Clarifies intent that the requirements in 5.35 are applicable to both portable and hard mounted, non-portable food shields.

~~**5.35.1**~~ **5.35.1.1** Food shield materials shall conform to the splash zone material requirements of 4.

~~**5.35.2**~~ **5.35.1.2** Food shields shall be designed and manufactured to conform to the splash zone requirements of 5.

~~**5.35.3**~~ **5.35.1.3** A food shield shall provide a barrier between the mouth of a customer and unpackaged food to minimize the potential of contamination of the food by a customer. A food shield in compliance with the applicable requirements herein shall be considered to be in compliance with the barrier requirement.

~~**5.35.4**~~ **5.35.1.4** If provided, lights, heating elements and other accessory fixtures shall be designed, manufactured and installed to conform to the splash zone requirements of 4 and 5

~~**5.35.5**~~ **5.35.1.5** Food shield glass shall conform to the requirements of ~~5.44.3~~ 5.43.3. To protect against chipping, exposed edges of glass shall be protected by tight fitting channels, stripping materials, or other means such as rounding the edges of tempered glass.

~~**5.35.6**~~ **5.35.1.6 End shield**

5.35.1.6.1 A vertical barrier ~~(end shield)~~ shall be provided at each end of a foodshield. The vertical barrier shall be a minimum of 18 in (450 mm) deep (front-to-back) beginning at the bottom leading edge of the foodshield. The minimum height of the vertical barrier shall be equal to the overall height of the foodshield. The maximum distance from the bottom edge of the vertical barrier and counter top shall be 1.5 in (38 mm).

~~**5.35.6.1**~~ **5.35.1.6.2** A foodshield intended to be installed a maximum of 3 in (76 mm) from a building wall perpendicular to the foodshield is exempt from the requirements of ~~5.35.6~~ 5.35.1.6.1 provided that the height of the building wall is not lower than the overall height of the foodshield. The manufacturer's specification sheet, brochure, installation instructions and/or shop drawings shall include these building wall and proximity requirements.

~~**5.35.7.4**~~ **5.35.1.7** The maximum ~~horizontal~~ open space in any plane between ~~vertical, horizontal and angled~~ adjacent food shield panels ~~at post and framing member locations~~ shall be 2 in (51 mm), excluding post and framing members that are:

- located in the open space between food shield panels; and
- parallel with the open space between food shield panels.

Rationale: Open spaces between food shield panels may be present on all types of food shields. Moving the maximum open space stipulation to the general requirements section makes the requirement applicable to all food shields.

The term "horizontal" has been removed making the restriction on open space applicable to horizontal, vertical and angled food shield panels.

If specific criteria are met, post and framing members are considered to be a part of the barrier.

5.35.1.8 Food shields shall be designed and manufactured to minimize obstruction of a customer's view of the food.

Rationale: This requirement has been moved from the section on self-service food shields because it is applicable to all food shields.

~~**5.35.7**~~ **5.35.2 Self-service food shields** (see figure 16A)

The TG reviewed figure 16A. The dashed line is the permissible end shield profile. With a maximum vertical distance of 13", the bottom of end shield may be angled back 9¾" (0.75 X 13") from the bottom leading edge of the food shield. The figure shows the angle is back towards the front inside edge of displayed food area. The end shield is raised above the counter top a maximum of 1½".

The figure shows the front leading edge of the food shield positioned out over the tray slide. Angling back towards the front top corner of the counter top is currently permitted. This allows the requirement that the bottom of the end shield is raised above the counter top.

Another common configuration is when the counter top is extended out and serves as a tray rest. Under this configuration there is no separate tray slide. Without a separate tray slide, the angle point becomes an arbitrary point. Therefore the formula proposed in 5.35.2.4 is based on the formula in 5.35.2.2 and covers both counter configurations. The critical dimension is the how far back the food well is located from the bottom leading edge of the food shield. The distance between the bottom of the shield and the counter in 5.35.1.6.1 is not taken into account.

The proposed formula is different than how the angle back is currently determined and permitted by certification. The figure may need to be modified by drawing the dashed lined straight down and then back because in the figure, the front leading edge of the shield is just a little past the front edge of the countertop and the end shield would only angle back to the nosing on the countertop. This would allow the entire bottom edge of the shield would be a 1 ½ inch off of the counter. In the event there is no tray slide and the counter is extended out as a tray rest, the front nosing would be out where the tray slide edge is located on 16A. With a tray rest the angle back is not allowed and the end glass interferes with the tray rest area. Historically, the end shield was allowed to be angled back to the countertop and in line with the requirements. The countertop needs to the same level as the tray slide. If a tray slide does not exist the end shield could be angled back to the nosing. If there was no nosing, it would have to be straight down, which would interfere with the tray slide.

~~**5.35.7.1**~~ **5.35.2.1** The maximum vertical distance between a counter top and the bottom leading edge of a food shield shall be 13 in (330 mm).

~~**5.35.7.2**~~ **5.35.2.2** The minimum horizontal distance between the front inside edge of displayed food and the bottom leading edge of a food shield shall be three-quarters of the ~~maximum~~ vertical distance (0.75 x ~~maximum~~ vertical distance) of ~~5.35.7.1~~ 5.35.2.1.

Rationale: Clarifies intent. The minimum horizontal distance is calculated from the actual vertical distance between a counter top and bottom leading edge of a food shield, not the maximum vertical distance of 13".

~~**5.35.7.3**~~ **5.35.2.3** The sum of a food shield's protected horizontal plane (X) and its protected vertical plane (Y) shall be greater than or equal to 20 in (508 mm). Either X or Y may equal 0 in (0 mm).

~~**5.35.7.4** Food shields shall be designed and manufactured to minimize obstruction of a customer's view of the food.~~

Rationale: This provision is applicable to all food shields and has been moved to the general requirements section as 5.35.1.8.

~~**5.35.7.5** The maximum horizontal distance between vertical, horizontal and angled panels at post and framing member locations shall be 2 in (51 mm).~~

Rationale: This provision is applicable to all food shields and has been moved to the general requirements section as 5.35.1.7.

5.35.2.4 End shields may be angled from the bottom leading edge of the food shield towards the edge of displayed food a maximum of three-quarters of the vertical distance (0.75 x vertical distance) of 5.35.2.1.

Rationale: Provides a partial exemption to prevent the end shield from obstructing the trayslide/tray rest on a buffet counter.

~~5.35.8~~ 5.35.3 Food shields for use in elementary schools

~~**5.35.8.1**~~ **5.35.3.1** Food shields designed and manufactured for use in elementary schools and other similar applications shall have full front panel(s) complying with ~~5.35.12~~ 5.35.7 or be designated for use with wrapped or packaged serving portions.

M. Perez noted this section does not prohibit the use of a self-serve food shield in an elementary school. This section does require a food shield specifically designed and manufactured for use in an elementary school include a full front panel. This section does not state self-service is not allowed. T. Johnson noted that FDA is not going to enforce this requirement and asked "Where is the data supporting this requirement?" and stated "This requirement is not supported by science, creates confusion and is not needed". The Standard was silent on food shields for elementary school for a long period of time. Regulatory requests resulted in the requirement being added for cafeteria, carving station and elementary schools. In some instances this section is used as regulatory requirement instead of certification requirement as intended. Currently there are no food shields specifically certified for use in elementary schools.

As written it is a use requirement and not design requirement. Therefore it is outside of the scope/purpose of the Standard. The TG unanimously agreed via a vote to delete this section.

~~5.35.9~~ 5.35.4 **Multiple tier food shields**

~~5.35.9.1~~ **5.35.4.1** A bottom tier self-service foodshield ~~over the bottom tier~~ shall conform to ~~5.35.7~~ 5.35.2.

~~5.35.9.2~~ **5.35.4.2** All tiers above the bottom tier shall have a permanent attached label restricting use to wrapped or packaged serving portions.

5.35.4.3 All tiers above the bottom tier are exempt from 5.35.1.6.

Rationale: Provides an end shield exemption for tiers above the bottom tier. Displayed food on upper tiers must be pre-packaged. Therefore end shields are unnecessary.

~~5.35.10~~ **5.35.5 Food shields for use on mobile buffet counters**

Food shields for use on mobile buffet counters shall conform to ~~5.35.7~~ the applicable specific use food shield requirements.

In the past whether mobile buffet counters had food shields was discussed and some felt were unnecessary. The TG agreed this requirement is redundant and therefore not necessary. This requirement will be deleted.

~~5.35.11~~ **5.35.6 ~~Food shields for use on cooking and/or carving station operations~~ Vertical food shields** (see figure 16B)

Rationale: A cooking or carving station may be located behind a self-service or cafeteria style food shield. The term vertical food shield more accurately describes the food shield shown in figure 16A.

The end shield profile has been added to figure 16B. An exemption was not added for an angle back at the bottom front corner. The same issue may occur with the tray slide as with 16A. The shield would need to be attached in some way. No one can recall seeing a vertical shield with a tray slide.

~~5.35.11.1~~ **5.35.6.1** ~~Food shields for use on cooking and/or carving stations~~ Vertical food shields shall ~~include a vertical~~ provide a barrier to a minimum height of 24 in (610 mm) above the counter top but not less than 60 in (1524 mm) above the finished floor. The manufacturer's product information, installation instructions and/or shop drawings shall include guidelines for meeting the minimum height requirements.

Rationale: For certification purposes, it is assumed that a vertical food shield will be mounted to a counter top that is 34" to 36" above the finished floor. In the event a VFS is mounted to a surface less than 34" above the finished floor, the 60" minimum height requirement shall prevail. Requiring a manufacturer to include provisions for meeting the minimum height requirements in the product documentation communicates the intent to the installer and end user.

~~5.35.11.2~~ **5.35.6.2** The maximum vertical distance from the bottom edge of the food shield and counter top shall be 6 in (152 mm).

~~5.35.11.3~~ **5.35.6.3** The minimum horizontal distance between the front inside edge of displayed food and the front (customer side) face of the food shield shall be three-quarters of the vertical distance (0.75 x vertical distance) of ~~5.35.11.2~~ 5.35.6.2.

5.35.6.4 End shields shall comply with 5.35.1.6 except the minimum depth (front-to-back) may be reduced to 12 in (305 mm).

Rationale: Minimum 12" end shields on a vertical food shield provide reasonable protection to unpackaged food.

~~**5.35.12**~~ **5.35.7 Food shields for use on cafeteria counters** (see figure 16C)

The end shield profile has been added to 16C, which does not add any issues. The difference is the angle back profile which would be applicable in a cafeteria but not in a vertical food shield.

~~**5.35.12.1**~~ **5.35.7.1** The sum of a food shield's protected horizontal plane (X) and its protected vertical plane (Y) shall be greater than or equal to 32 in (813 mm). When (X) equals 0 in (0 mm), ~~(Y) shall be a minimum of 60 in (1524 mm)~~ the food shield shall comply with 5.35.6.1.

Rationale: Clarifies intent and establishes a minimum height requirement when X = 0.

The X + Y ≥ 32" equation was derived from vector intercept diagrams. Set mouth heights were used based on gender using anthropometric data. The mouth heights for adults were higher than what was previously used prior to 2000. This created a potential for contamination above the shield based on those taller than the shield. The angle back created the dimensional requirement for cafeteria food shields. The problem exists when the Y = 12". If the Y dimension was 12" – 14", the top shelf would need to be longer because of the potential of contamination over the shield. With a taller food shield, the X dimension could be less. The option exists to include additional length to X if Y was greater than 18". Vertical shields are common and once a certain distance is reached that top shelf can become huge. The angle can be increased and the top shelf can be reduced along with the height. Work needs to be completed on the figure to better reflect true proportions. Language such as the following could be added:

If Y = 24" then a top shelf is not required. This would allow the shield be able to be angled back and would meet the intent.

~~**5.35.12.2**~~ **5.35.7.2** The maximum distance from the bottom edge of the front (vertical) glass and counter top shall be 1.5 in (38 mm).

~~**5.35.12.3**~~ **5.35.7.3** The ~~maximum distance~~ open space between ~~the~~ vertical ~~glass~~ and horizontal ~~glass~~ food shield panels is 0.75 in (19 mm).

Rationale: Terminology revised to match 5.35.1.6.1.

~~**5.35.12.4**~~ **5.35.7.4** The minimum horizontal distance between the front inside edge of displayed food and the bottom leading edge of a food shield is 1.5 in (38 mm).

5.35.8 Counter top, movable, self-service food shields (see figure 16D)

5.35.8.1 The maximum vertical distance between the counter top and bottom leading edge of a food shield shall be 18 in (450 mm).

5.35.8.2 The sum of a food shield's protected horizontal plane (X) and its protected vertical plane (Y) shall be greater than or equal to 20 in (508 mm). Either X or Y may equal 0 in (0 mm).

5.35.8.3 End shields may be angled from the bottom leading edge of the food shield towards the food a maximum of 8 in (203 mm).

Rationale: New requirements for counter top, portable, self-service food shields.

5.35.8.4 The manufacturer's product information, installation instructions and/or shop drawings shall include a statement, illustration or diagram indicating the minimum horizontal distance from displayed food and the bottom leading edge of a food shield is 8 in (203 mm).

Rationale: This informative provision is intended to communicate minimum set-back requirements to installers, operators and regulators.

5.35.9 Self-service food shields for use on movable, counter top equipment (see figure 16E)

This figure has a food display area. There is some control over the setback. The proposed formula allows 60% of the vertical opening. The food display is heated or chilled and the wells set above the countertop, it reduces the opening.

5.35.9.1 The maximum vertical distance between the food display area and bottom leading edge of a food shield shall be 18 in (450 mm).

5.35.9.2 The minimum horizontal distance between the front edge of the food display area and the bottom leading edge of a food shield shall be 60 percent of the vertical distance (0.6 x vertical distance) of 5.35.9.1.

5.35.9.3 The sum of a food shield's protected horizontal plane (X) and its protected vertical plane (Y) shall be greater than or equal to 18 in (450 mm). Either X or Y may equal 0 in (0 mm).

5.35.9.4 A vertical barrier shall be provided at each end of the foodshield. The vertical barrier shall extend from the bottom leading edge of the food shield a minimum of 18" (450 mm) deep (front-to-back) or to the back of the food display area, whichever is less. The minimum height of the vertical barrier shall be equal to the overall height of the foodshield. The maximum distance from the bottom edge of the vertical barrier and food display area shall be 1.5 in (38 mm).

5.35.9.4.1 End shields may be angled from the bottom leading edge of the food shield to the top leading corner of the food display area.

Rationale: New requirements for self-service food shields when provided on portable and/or counter top equipment.

The TG will resume discussion on 5.35.10 on the next teleconference.

M. Perez thanked everyone for their participation. The TG would not be where it is without everyone on this call.

The next teleconference is scheduled for Wednesday, December 12, 2012 at 2:00 pm ET. Teleconferences have been extended through February 2013.