Current State

- As NSF/ANSI Standard 50 does not adequately address health effects of pool chemicals, the State of Florida requires pool chemicals to be certified under NSF/ANSI Standard 60.

- NSF/ANSI Standard 60 does not address potential dermal and inhalation exposure that may occur in pool/spa uses.

- Oral exposure assumptions in Standard 60 may be overly restrictive.
Draft Annex A

• The proposed Annex A defines the toxicological review and evaluation procedures for the assessment of health effects of swimming pool treatment chemicals

• Based predominantly on swimming pool treatment chemical exposure approaches used by the U.S. EPA Office of Pesticide Programs in addition to toxicology evaluation procedures from Annex A of both NSF/ANSI Standards 60 and 61
Annex A – General Procedure

• Initial requirement is to obtain product formulation information
  – Must include identification of all unique chemical constituents
  – Product use instructions must be provided that designate a maximum recommended dose rate

• Based on the formulation information and maximum recommended dose rate, the concentration of each chemical constituent in the swimming pool water is determined
Annex A – General Procedure

• As an initial toxicity screen, any chemical constituent that has a concentration in the swimming pool water of ≤10 µg/L does not require further toxicological evaluation
  – This threshold value does not apply to any substance for which there is a concern for adverse health effects at concentrations ≤10 µg/L based on available toxicity data and scientific judgment
  – Threshold of 10 µg/L based on FDA Threshold of Regulation value from 21 CFR 170.39
Annex A – General Procedure

• For chemical constituents or contaminants that exceed 10 µg/L in the swimming pool water, three additional steps are utilized:
  – Exposure assessment using exposure assumptions and equations obtained from the U.S. EPA Office of Pesticide Programs
    • Accounts for oral, dermal and inhalation routes of exposure
  – Determination of acceptable exposure levels for each chemical constituent
    • Based on published peer-reviewed assessments or determined utilizing an approach similar to Annex A in Standards 60/61
  – Comparison of estimated exposures with the acceptable exposure levels to determine product acceptance.
Questions/Comments