LOG OF MEETING DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: ASTM F24.24 AR/VR Task Group

DATE OF MEETING: August 19, 2022

PLACE OF MEETING: Teleconference

LOG ENTRY SOURCE: Daniel Taxier (ESMC)

COMMISSION ATTENDEES: Daniel Taxier (ESMC), Treye Thomas (EXHR), Jonathan Midgett (OEX), Andrew Ginsburg (OLA)

NON-COMMISSION ATTENDEES: Contact ASTM for attendee list.

SUMMARY OF MEETING:

The purpose of this meeting was to discuss proposed requirements for ASTM F24 amusement ride and device standards related to cleaning, disinfecting, and sanitizing augmented reality and virtual reality (AR/VR) head-mounted displays. The proposed language has been through multiple iterations since the October 2021 F24.24 subcommittee meeting.

The task group was updated on the development of UL 8400, a draft standard that includes safety requirements related to AR/VR equipment. Several attendees, including Commission staff, have been involved in the development of this standard. One task group member said that the latest ballot, which closed on August 3, had achieved consensus. The standard will go through the recirculation ballot process to address remaining negatives, and members involved in the standard development process expect the standard to be published in October or November of this year. UL 8400 does not include requirements related to cleaning, disinfecting, or sanitizing AR/VR equipment because it is not geared toward the amusement ride industry.

The remainder of the discussion focused on the latest iteration of the proposed requirements for ASTM F24 standards:

- ASTM F2291 Standard Practice for Design of Amusement Rides and Devices
 - All components of a head mounted display device that contact a patron's skin and is reusable shall be made of a material that can be cleaned and sanitized and/or disinfected.
- ASTM F770 Standard Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices
 - When utilizing head mounted displays that contact a patron's skin and is reusable, a cleaning and disinfecting and/or sanitizing process shall be completed prior to another patron using the head mounted display.
 - When UV-C light is utilized, all surfaces must obtain direct contact from the line of sight or a reflected surface.
 - When utilizing wipes, non-abrasive, non-hazardous, anti-bacterial solutions shall be used to the prescribed AHJ kill time.

The task group discussed making further distinction between requirements for sanitization vs. disinfection. CPSC staff noted that the Environmental Protection Agency (EPA) has specific requirements related to disinfection and sanitization. Others noted that other countries may define these terms differently.

The task group next discussed the effects of UV-C exposure. A task group member was concerned that reflected surfaces reduce the dosage of UV-C applied to the surface. Others responded that this reduced dosage would have to be accounted for. Task group members noted that UV light degrades certain materials. Staff responded that UV degradation should be accounted for in the design and operation of the device.

CPSC staff asked the task group whether a percent efficacy was considered as a requirement. The task group had not, citing concerns about this being interpreted as a requirement for owners and operators to test after each cycle. The task group chair said he would look into this topic further.

For the next meeting, the task group chair will prepare a new draft of the requirements based on a review all of the feedback on the proposed language and a review of international usage of sanitization and disinfection (to ensure requirements are interpreted similarly across jurisdictions). The task group will meet during the F24 Committee Meeting taking place from October 12 to October 15, 2022 at the Sheraton Gunter Hotel San Antonio, San Antonio, TX.