U.S. CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

March 2, 2020

Katherine E. Morgan
President
ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428

RE: *Additive Manufacturing/3D Printing of Consumer Products*

Dear Ms. Morgan,

On October 30, 2019, Richard McCallion and other U.S. Consumer Product Safety Commission (CPSC) staff briefed the Commission on Additive Manufacturing/3D Printing and potential associated hazards. The slide presentation from the briefing is attached for your review and consideration. As part of the briefing, staff[1] outlined a number of hazard areas with 3D printing technology, in which voluntary standards development could help reduce potential hazards and risks.

Staff is concerned with hazards posed by the 3D printing process and 3D printed consumer products. Specifically, there are potential fire, electrical, chemical, and mechanical hazards associated with the 3D printer and printed products. Additionally, staff is particularly interested in potential hazards posed to children, a vulnerable population, including children who used 3D printers and 3D printed consumer products intended for children.

Standards developing organizations, such as ASTM, are well-positioned to lead the development of consensus standards to help guide the range of stakeholders (including manufacturers, importers, material suppliers, and intellectual property holders) about the best way to ensure the safety of consumers who use these products. In particular, these standards should address the 3D printer and the lifecycle of the 3D printed products over a full range of potential exposures, by implementing a good risk-management strategy. CPSC staff requests that ASTM consider the development of standards or best practices guidance associated with the safety of additive manufacturing as it relates to consumer products.

[1] This letter and the attached slides were written by CPSC staff and have not been reviewed or approved by the Commission, and therefore may not necessarily reflect the views of the Commission.

ASTM is an important standards development organization with which CPSC staff is working to address hazards associated with additive manufactured parts. ASTM F42 committee for additive manufacturing technologies and the ASTM Additive Manufacturing Center of Excellence are focused on the development of standards related to the materials, process, and properties of additive manufactured parts. To date, the majority of applications under development by ASTM F42 are not related to consumer products. Currently, the ASTM F42 committees are driven by medical, aerospace, and defense applications and associated interests. CPSC staff's role in ASTM F42 standards activities is limited at this time to participation in the subcommittee ASTM F42.07.09 on Consumer Products. Staff is also on the roster of subcommittee ASTM D22.05 on Indoor Air Quality, where we are participating in the development of guidance for 3D printing processes.

We welcome the chance to meet with you and others at ASTM, and we can arrange a briefing to outline CPSC staff's concerns and recommendations to explore other approaches to support consumer safety regarding 3D printing. If this is of interest to ASTM, please contact me by email at: pedwards@cpsc.gov, or by telephone at: 301-987-2224. We appreciate the opportunity to work with you on this very important consumer safety issue.

Sincerely,

Patricia Edwards
Voluntary Standards Coordinator

Cc: Richard McCallion, Program Area Risk Manager, Mechanical, Recreational, Sports and Seniors

Treye Thomas, Ph.D., Program Area Risk Manager, Chemical, Nano, and Emerging Materials

Scott Ayers, Voluntary Standards Specialist