



U.S. Department of Justice

Bureau of Alcohol, Tobacco,
Firearms and Explosives

Assistant Director

NOV 14 2013

Washington, DC 20226
www.atf.gov

The Honorable Edward J. Markey
United States Senate
Washington, DC 20510

Dear Senator Markey:

This is in response to your letter dated May 8, 2013, to the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), in which you requested information regarding the preparations ATF is making to address the rapid advances in the field of additive manufacturing (a.k.a. “3D printing”) technology as it relates to firearms. We apologize for the delay in our response.

As you are aware, ATF is at the frontline in the reduction of violent crime. Combating violent crime is our primary task. The Bureau’s regulatory and enforcement missions are interwoven, providing a comprehensive approach to reducing violent crime, protecting the public, and protecting national security. The integrated efforts of our special agents, industry operations investigators, attorneys, scientists, technical experts, forensic auditors, and administrative professionals allow ATF to effectively identify, investigate, and recommend for prosecution violators of the Federal firearms and explosives laws and to ensure that licensees and permittees are operating within established laws and regulations. External partnerships with other Federal, State, local, tribal, and international law enforcement entities further enhance this synergy.

The Firearms Technology Branch (FTB) provides expert technical support to ATF, other Federal agencies, State and local law enforcement, the firearms industry, Congress, and the general public. FTB is responsible for rendering findings regarding the classification of suspected illegal firearms and newly designed firearms. FTB has been aware of 3-D printing/additive manufacturing technology for several years. FTB evaluates many different prototype items and has examined a number of items which were created using this technology. As the technology developed, FTB observed that the materials became stronger, and concluded that it was a matter of time before an attempt was made to create a complete firearm using additive manufacturing technology.

In late 2012, Mr. Cody Wilson initiated a Web site, defcad.org, where he made available the .stl files which can be used to print various items using 3D printers. The most controversial item was the Liberator pistol, a .380 caliber single-shot pistol constructed entirely of plastic, with the exception of the firing pin and ammunition cartridge. The Liberator was covered in the media in

The Honorable Edward J. Markey

early 2013, drawing considerable attention to the defcad.org Web site. The .stl files for the Liberator were downloaded more than 100,000 times before the U.S. Department of State asked Mr. Wilson to remove the files due to potential International Traffic in Arms Regulations (ITAR) violations.

ATF quickly assumed a leading role in addressing the potential security concerns accompanying the availability of a functional firearm constructed almost completely of plastic. From May to July 2013, ATF organized and conducted a series of tests in order to determine the efficacy of the Liberator design. Most of these tests were conducted at the ATF Fire Research Laboratory in Ammendale, Maryland, and involved the support of other Federal law enforcement partners. The results of the testing were compiled for dissemination in *FTB Technical Bulletin* 13-01 (copy enclosed).

In order to increase awareness of firearms-related 3D printing issues, FTB has given presentations on the subject to a variety of interested parties, including the U.S. Department of Homeland Security, the U.S. Senate Sergeant at Arms, and the U.S. Capitol Police. We continue to receive requests for this presentation and have additional presentations scheduled in the future.

ATF personnel are working to foster a productive working relationship with members of the additive manufacturing industry. Recent meetings with industry members have been extremely productive, allowing ATF personnel to gain additional knowledge and expertise. In August 2013, FTB personnel toured the facility of ExOne, a company which specializes in additive manufacturing technology using metallic powder as opposed to plastic material. In September 2013, an ATF group met with senior officials of the Stratasys Company, a leader in the additive manufacturing field.

ATF is also working to bring attention to the pending expiration of an important statute, the Undetectable Firearms Act, Title 18, United States Code, Section 922(p). Originally passed in 1988, the Undetectable Firearms Act prohibits the manufacture or possession of “firearms” that are not as detectable as 3.7 ounces of 17-4 ph stainless steel in walk-through metal detectors, or do not accurately show their actual shapes on X-ray machines commonly used at airports. Section 922(p) originally contained a 10-year sunset provision, but was reauthorized in 1998 and again in 2003. Without reauthorization, this important statute will sunset on December 10, 2013.

By conducting tests of 3D printed firearms, compiling information on the additive manufacturing industry, and sharing information with our law enforcement partners, ATF is at the frontline in the reduction of violent crime involving these firearms. In furthering this effort, FTB continues to provide expert technical support to ATF, other Federal agencies, State and local law enforcement, the firearms industry, Congress, and the general public regarding the manufacture, classification, and use of 3D printed firearms.

The Honorable Edward J. Markey

We hope this information has been responsive to your concerns. Please let me know if we can be of further assistance.

Sincerely yours,

A handwritten signature in black ink, appearing to read "R. Marianos". The signature is written in a cursive style with a large, prominent initial "R".

Richard W. Marianos
Assistant Director
Public and Governmental Affairs

Enclosure