



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

December 3, 2015

Mr. Greg Knott
Director, Industry Affairs
Outdoor Power Equipment Institute
341 South Patrick Street
Alexandria, Virginia 22314

Dear Mr. Knott:

In previous letters to Ms. Kathy Woods^{1,2} and Mr. James McNew^{3,4} of the Outdoor Power Equipment Institute (“OPEI”), the U.S. Consumer Product Safety Commission (“CPSC”) staff expressed concerns about gasoline fuel leakages from outdoor ground-supported gasoline-powered equipment (“OGSGPE”). These products include riding lawn mowers/lawn tractors, push lawn mowers, portable generators, pressure washers, tillers, and snowblowers/snowthrowers.

Although the American National Standards Institute (“ANSI”) and Outdoor Power Equipment Institute standard ANSI/OPEI B71.10 – *Standard for Ground Supported Outdoor Power Equipment – Gasoline Fuel Systems* has been in existence since 2008, CPSC staff continues to observe a substantial number of recalled units due to OGSGPE fuel leaks. CPSC staff identified several sources of fuel leaks: fuel tank splits, fuel tank stress cracks, fuel tank seam gap, cracked fuel hoses, fuel hoses separating, and fuel vent grommets not sealing properly. From 2009 through 2013, there were more than 400,000 recalled units.

Concerned that ANSI/OPEI B71.10 - 2013 may not be sufficient to address potential fire hazards from OGSGPE’s, CPSC staff initiated a project to study probable causes of fuel leaks associated with OGSGPE. As you know, CPSC staff wrote and publicly released an engineering report⁵, titled “Study of

¹ Letter sent to Kathy Woods of OPEI from Han Lim of CPSC staff, March 19, 2013. Internet source: <http://www.cpsc.gov/Global/Regulations-Laws-and-Standards/Voluntary-Standards/Draft-Voluntary-Standards-Proposals/opeiletter031913.pdf>

² Letter sent to Kathy Woods of OPEI from Han Lim of CPSC staff, August 24, 2012.

³ Letter sent to James McNew of OPEI from Susan Bathalon of CPSC staff, June 14, 2007, Internet source: <http://www.cpsc.gov/PageFiles/117840/ansi61407.pdf>

⁴ Letter sent to James McNew of OPEI from Susan Bathalon of CPSC staff, November 8, 2006, Internet source: <http://www.cpsc.gov/PageFiles/117837/ansi11806.pdf>

⁵ Lim, H., “Study of Fuel Leaks Associated with Outdoor Ground-Supported Gasoline-Powered Equipment,” US Consumer Product Safety Commission, Rockville, Maryland, 2015. Internet Source:

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Fuel Leaks Associated with Outdoor Ground Supported Gasoline Powered Equipment” that details the findings of the study and discusses incidents from the Consumer Product Safety Risk Management System (“CPSRMS”), which includes In-Depth Investigation (“INDP”) files and Injury or Potential Injury Incident (“IPII”) files, to indicate how the fuel leaks may have occurred.

The above-mentioned engineering report provides details on how CPSC staff conducted tests on exemplar fuel tank assemblies to the various performance tests based on ANSI/OPEI B71.10-2013 and other related standards, such as the Society of Automotive Engineers (“SAE”) J288-2014 - *Snowmobile Fuel Tank Standard*, ANSI/OPEI B175.1-2012 - *Standard for Outdoor Power Equipment – Internal Combustion Engine-Powered Hand-Held Chain Saws – Safety and Environmental Requirements*, and the ANSI/OPEI B71.3-2014 - *Standard for Snow Throwers – Safety Specifications*. Some of these performance tests include drop impact, pressure cycling, thermal stress crack, fuel hose tensile test, among many others. The full list of standards and tests is detailed in the engineering report.

The exemplar fuel tank assemblies passed all of the performance tests performed by CPSC staff. However, when comparing the passing results to the large number of incidents and recalls, CPSC staff is concerned ANSI/OPEI B71.10-2013 may not be sufficient to address fuel leaks. Furthermore, CPSC staff observed that ANSI/OPEI B71.10-2013 does not have test procedures to directly evaluate the structural integrity of certain fuel system components, such as fuel filters and fuel vent grommets that have caused fuel leaks.

CPSC would like to offer to host a meeting with the ANSI/OPEI B71.10 technical subcommittee at our National Product Evaluation and Testing Center in Rockville, Maryland to facilitate a discussion on the findings in the engineering report and examine possibilities to improve the ANSI/OPEI B71.10-2013 standard. CPSC staff looks forward to engaging in a dialogue with ANSI/OPEI B71.10 technical subcommittee to work collaboratively to identify gaps in the ANSI/OPEI B71.10-2013 standard and improve the standard, with the goal of reducing the risk of fuel leaks associated with OGSPE.

Sincerely,

Han Lim
Mechanical Engineer
Division of Combustion and Fire Sciences
Directorate for Engineering Sciences

cc: Colin Church, CPSC Voluntary Standards Coordinator

Attachment: U.S. Consumer Product Safety Commission. “Study of Fuel Leaks Associated with Outdoor Ground Supported Gasoline Powered Equipment,” H. Lim. September 2015.

<http://www.cpsc.gov/Media/Documents/Research--Statistics/Technical-Reports/General-Information/Other-Technical-Reports-/Study-of-Fuel-Leaks-Associated-with-Outdoor-Ground-Supported-Gasoline-Powered-Equipment/>