October 5, 2015

Ball Aerospace Completes Integration Milestone for NASA's Green Propellant Infusion Mission

First-ever U.S. demonstration of non-toxic spacecraft fuel set for 2016 launch

BOULDER, Colo., Oct. 5, 2015 /PRNewswire/ -- Ball Aerospace, prime contractor for NASA's Green Propellant Infusion Mission (GPIM), has integrated the propulsion subsystem onto the BCP-100 spacecraft bus and begun system performance and environmental testing as the project heads toward a 2016 launch date.

The Green Propellant Infusion Mission aims to revolutionize spaceflight by demonstrating improved overall propellant efficiency while reducing the toxic handling concerns associated with the traditional hydrazine propellant. The Ball-led validation mission, will characterize the green fuel's performance on orbit during a 13-month mission that also hosts three experimental payloads.

"GPIM is the key mission to demonstrate a green monopropellant alternative to hydrazine," said Jim Oschmann, vice president and general manager of Civil Space at Ball Aerospace. "Everyone in the industry, from NASA to our industry partners to green propellant suppliers, is eager to see 10 years of American-led research and development realized with this spaceflight mission."

The Aerojet Rocketdyne-provided Green Propellant Propulsion Subsystem was delivered to Ball Aerospace in August and was integrated onto the Ball Commercial Platform (BCP-100) spacecraft bus in less than two weeks. Prior to launch, the subsystem will be loaded with a non-toxic propellant called AF-M315E, developed by the Air Force Research Laboratory. In addition to a simplified launch process for future spacecraft, the GPIM technology offers increased payload space and longer mission duration.

"NASA is always looking for new technologies that also allow us an opportunity to improve safety and cost efficiency," said Trudy Kortes, program executive for NASA's Technology Demonstration Missions. "GPIM additionally affords us an opportunity to test an environmentally friendly fuel in space for the first time, and there's nothing more rewarding than a trailblazing mission."

GPIM is the third build of the BCP-100 spacecraft bus. Roughly the size of a mini

refrigerator, the BCP-100 can host a minimum of four independent payloads and demonstrates the ability to rapidly access space by using standard interfaces on a standard spacecraft bus.

In addition to the Green Propellant Propulsion Subsystem, three Department of Defense (DoD) Experiments Review Board (SERB) experimental payloads will fly aboard GPIM. Two of the three payloads previously flew on the Ball-built STPSat-3, which launched in 2013. This is the third time Ball has integrated DoD (SERB) payloads to the BCP-100 platform. The SERB chooses experiments based on a high potential to provide new or enhanced warfighting capabilities for the DoD. Payloads are designed to be compatible with the spacecraft bus, resulting in lower spacecraft non-recurring costs, shorter acquisition timelines, decreased spacecraft build costs, and increased spaceflight opportunities.

GPIM is sponsored by NASA's Space Technology Mission Directorate. In addition to Ball Aerospace and Aerojet Rocketdyne, the team includes the U.S. Air Force Research Laboratory at Edwards Air Force Base; the Air Force Space and Missile Systems Center at Kirtland Air Force Base, New Mexico; and three NASA field centers: NASA's Glenn Research Center in Ohio, NASA's Kennedy Space Center in Florida, and NASA's Goddard Space Flight Center in Maryland. The Technology Demonstration Missions program office at NASA's Marshall Space Flight Center manages GPIM.

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To view the original version on PR Newswire, visit:http://www.prnewswire.com/news-releases/ball-aerospace-completes-integration-milestone-for-nasas-green-propellant-infusion-mission-300153423.html

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