Ball Aerospace Completes MethaneSAT Preliminary Design Review

BOULDER, Colo., Feb. 20, 2020 /<u>PRNewswire</u>/ -- Ball Aerospace successfully completed the preliminary design review (PDR) of the advanced spectrometer instrument for the MethaneSAT Flight System, a 350-kilogram satellite that will locate and measure methane emissions around the globe. With the completion of PDR, Ball will proceed with the critical design phase.

"We are excited to be a part of a mission that aims to study and address the impact of methane on the environment and climate," said Dr. Makenzie Lystrup, vice president and general manager, Civil Space, Ball Aerospace. "MethaneSAT fits well with Ball's long history of earth science, our commitment to sustainability and our experience in providing highly-calibrated measurements of environmental factors related to ozone, weather and pollution."

MethaneSAT is expected to be launched in 2022 by MethaneSAT LLC, a subsidiary of Environmental Defense Fund (EDF). The non-profit is dedicated to creating innovative science-based solutions to critical environment challenges, including anthropogenic methane emissions, a significant contributor to global climate change.



Two extremely sensitive spectrometers sit at the heart of the Ball-designed instrument that will measure a narrow part of the shortwave infrared spectrum where methane absorbs light, allowing it to detect concentrations as low as two parts per billion. In addition to the MethaneSAT instrument, Ball Aerospace is providing flight systems integration and testing, launch support, and commissioning services.

"MethaneSAT is built around a set of high performance technologies and sophisticated analytics tools that when combined provide a major leap in our ability to measure and quantify even low-level methane emissions across the globe from space," said mission co-lead Dr. Steven Hamburg, who also serves as Chief Scientist for Environmental Defense Fund. "We're asking a lot of our technical partners and Ball Aerospace is rising to the occasion."

Ball Aerospace has more than six decades of experience providing leading-edge systems, delivering instruments that span the electromagnetic spectrum for a wide range of government and commercial applications to help predict the weather, map air quality and monitor the Earth's environment. For example, Ball built LIDAR and wide-field camera instruments for NASA's Cloud-Aerosol LIDAR and Infrared Pathfinder Satellite Observations (CALIPSO) mission; the Tropospheric Emissions: Monitoring of Pollutions (TEMPO) instrument to measure air quality for a NASA mission; and the Ozone Mapping and Profiler Suite (OMPS) of hyperspectral instruments that measure the global distribution and vertical structure of ozone for NASA and NOAA missions. OMPS-1 and OMPS-2 are currently flying on Suomi NPP and the Ball-built Joint Polar Satellite System-1 (JPSS-1, now NOAA-20), respectively. Ball is also building OMPS instruments for follow-on JPSS satellites.

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About Ball Corporation

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Forward-Looking Statements

This release contains "forward-looking" statements concerning future events and financial performance. Words such as "expects," "anticipates," "estimates," "believes," "targets," "likely," "positions" and similar expressions typically identify forward-looking statements, which are generally any statements other than statements of historical fact. Such statements are based on current expectations or views of the future and are subject to risks and uncertainties, which could cause actual results or events to differ materially from those expressed or implied. You should therefore not place undue reliance upon any forward-looking statements and any such statements should be read in conjunction with, and, qualified in their entirety by, the cautionary statements referenced below. The company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Key factors, risks and uncertainties that could cause actual outcomes and results to be different are summarized in filings with the Securities and Exchange Commission, including Exhibit 99 in our Form 10-K, which are available on our website and at <u>www.sec.gov</u>. Additional factors that might affect: a) our packaging segments include product capacity, supply, and demand constraints and fluctuations; availability/cost of raw materials and logistics; competitive packaging, pricing and substitution; changes in climate and weather; footprint adjustments and other manufacturing changes, including the startup of new facilities and lines; failure to achieve synergies, productivity improvements or cost reductions; mandatory deposit or other restrictive packaging laws; customer and supplier consolidation; power and supply chain interruptions; potential delays and tariffs related to the U.K's departure from the EU; changes in major customer or supplier contracts or a loss of a major customer or supplier; political instability and sanctions; currency controls; changes in foreign exchange or tax rates; and tariffs, trade actions, or other governmental actions in any country affecting goods produced by us or in our supply chain, including imported raw materials, such as pursuant to Section 232 of the U.S. Trade Expansion Act of 1962 or Section 301 of Trade Act of 1974; b) our aerospace segment include funding, authorization, availability and returns of government and commercial contracts; and delays, extensions and technical uncertainties affecting segment contracts; c) the company as a whole include those listed plus: the extent to which sustainability-related opportunities arise and can be capitalized upon; changes in senior management, succession, and the ability to attract and retain skilled labor; regulatory action or issues including tax, environmental, health and workplace safety, including U.S. FDA and other actions or public concerns affecting products filled in our containers, or chemicals or substances used in raw materials or in the manufacturing process; technological developments and innovations; information technology initiatives and management of cyber-security processes; litigation; strikes; labor cost changes; rates of return on assets of the company's defined benefit retirement plans; pension changes; uncertainties surrounding geopolitical events and governmental policies both in the U.S. and in other countries, including the U.S. government elections, budget, sequestration and debt limit; reduced cash flow; interest rates affecting our debt; and successful or unsuccessful joint ventures, acquisitions and divestitures.

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