NEWS RELEASE

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SUCCESSFUL QUALIFICATION OF FULL-SCALE, ALL-COMPOSITE CRYOGENIC LOX TANK OPENS THE WAY TO LOW-COST, RESPONSIVE LAUNCH-ON-DEMAND

For Immediate Release

EL SEGUNDO, CA, July 13, 2006 – Microcosm, Inc., an aerospace engineering firm in El Segundo, California, today announced successful completion of final qualification tests on the full-scale, all-composite cryogenic LOX tank for the Sprite Small Launch Vehicle. In testing done for the Scorpius Space Launch Company (SSLC), Microcosm successfully tested a 42-inch diameter all-composite liquid oxygen (LOX) tank to nearly 4 times its operating pressure of 550 psi. Testing was done at cryogenic temperatures using liquid nitrogen. The work was done as part of the technology development program for the Scorpius® family of low-cost, responsive launch vehicles, under the direction of Aaron Leichner and program manager, Dr. Robert Conger.

According to Maj. Gen. (ret.) Jack Kulpa, President of the Scorpius Space Launch Company, “We are extremely pleased with the exceptional performance of the Sprite LOX tanks. This result will allow us to reduce the weight of the propellant tanks for Sprite and, consequently, increase the mass to orbit by over 30%. This would mean a projected performance of approximately 1050 lbs to low Earth orbit (LEO) for a vehicle originally designed for 700 lbs to LEO. Most launch vehicles tend to reduce projected performance as the design matures. It

is an indication of the robustness of the Scorpius vehicle design that the projected performance is now 150% of the initial design projections."

The qualification program included testing of 10-inch and 25-inch subscale tanks which performed to comparable levels. According to Kulpa, "This advance has come about due to new manufacturing approaches by Microcosm and new materials technology from CTD [Composite Technology Development of Lafayette, CO]. We are grateful to both organizations for their pioneering work that is also scalable to much larger tanks and launch vehicles. We will offer this technology in a range of sizes as well as custom-made pressure vessels for industrial applications where ultra-high strength-to-weight is important." The 42-inch composite tank will be flown on the SR-M suborbital vehicle. The Sprite Small Launch Vehicle uses six 42-inch LOX tanks and six 42-inch kerosene tanks in the first stage and one of each in the second stage. The tanks are the main structural element of the vehicle.

According to Microcosm President, Dr. James Wertz, "We all understand that systems aren't proven until they have flown several times. Nonetheless, with the qualification of the full-scale, all-composite, cryogenic LOX tank to many times the required operating pressure, we now have all of the technology pieces needed to get to $4K/lb to LEO for light lift (and $1K/lb to LEO for medium lift) in moderate quantities in as little as 2 years for a final development cost of $40 million, rather than in the far term for a development cost of billions. As the launch rate grows, this cost can come down even more. The high strength and robustness of the system allows all-weather, very responsive launch-on-demand. This is an exceptionally exciting result for all of us in the space launch business and for low-cost Operationally Responsive Space." Further information and an explanatory video on the tank can be found on the SSLC website, www.Scorpius.com.

About Microcosm, Inc.

Microcosm is a small business specializing in space mission engineering and the development of technologies and methods to facilitate more responsive space missions at substantially reduced costs. Microcosm's four primary business areas include the Scorpius® family of Responsive, Low-Cost Expendable Launch Vehicles; Mission Integration for Responsive Space Systems; Autonomous Guidance, Navigation and Control Systems; and Space Mission Engineering, Architecting, and Cost Modeling.

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The Microcosm tanks support all weather launch and quite a bit more. These are two prototype LOX tanks for the Sprite Small Launch Vehicle, a member of the Scorpius® family of responsive, low-cost launchers. From left, Jim Wertz (in the cab), Aaron Leichner, Lynn Shimohara, and Shyama Chakroborty.

[High resolution photos are available for download at
http://www.smad.com/images.html]

The Microcosm engineering crew is on top of their work. This is the prototype LOX tank for the Sprite Small Launch Vehicle, a member of the Scorpius® family of responsive, low-cost launchers. From left, Dana, Keeler, Blake Bartosh, Jim Wertz, Aaron Leichner, John Collins, and Lynn Shimohara.

The composite tank is both strong and light weight. By picking up one end, Lynn, who works in the Microcosm business office, is lifting half the weight of the tank (without the pick-up or engineering crew on top). Notice that even though we gave her a 2x8 to stand on, she's still on tip toes lifting the tank.