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November 20, 2006

BY HAND and EMAIL (james.burtle@fcc.gov)

James R. Burtle, Chief
Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

**Re: Bigelow Development Aerospace Division, LLC
Experimental Application; Request for Expedited Processing (FCC
File No. 0091-EX-ML-2006)**

Dear Mr. Burtle:

This letter is submitted on behalf of Bigelow Development Aerospace Division, LLC ("Bigelow Aerospace" or "BA") in connection with its above-referenced application for modified experimental authority. By this letter, Bigelow Aerospace seeks expedited treatment of this pending application to permit the operation of two additional Earth stations in Alaska and Hawaii, commencing on December 1, 2006. Expedited action is required in order to enable Bigelow Aerospace to capture critical mission data from BA's now ongoing Genesis-1 experimental expandable space habitat program that is presently going unrecorded. Because the modification application does not seek access to additional spectrum, but simply requests operating authority for two additional Earth stations of the same type previously authorized, Bigelow Aerospace is hopeful that OET will be able to evaluate and act quickly on the request, or at least grant a special temporary authorization by December 1st.

Bigelow Aerospace's experimental space research operations, originally authorized through experimental licenses granted on June 27, 2005 and May 5, 2006 (Call Signs WD2XND and WD2XWW), are already producing valuable data. The purpose of the Genesis-1 mission is to validate the basic design concepts for the spacecraft and to conduct and monitor the first ever in-orbit pressurization of an expandable space habitat prototype. The Genesis-1 spacecraft has been operating in low-Earth orbit since mid-July 2006 and is sending back invaluable telemetry and spacecraft health information data to BA's Earth station facility in North Las Vegas, Nevada. Access to and analysis of this data have already demonstrated the long-term durability of



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expandable space platforms, but much more is yet to be learned from this initial experimental mission.

Currently, data can be transmitted from Genesis-1 for only 12 to 15 minutes during each orbital pass over the single operational ground station in North Las Vegas. As a result, only a fraction of the available mission data is actually being transmitted to BA's technical staff for review and analysis. Genesis-1 is now going through a critical phase during which very large amounts of vital performance data are being generated with respect to the expandable habitat's shell. Acquiring and evaluating this information is the central purpose of the Genesis-1 mission. Timely and complete access to this data is essential to ascertaining the space habitat's structural integrity, durability and longevity, and is paramount to BA's ability to enhance the technology and move forward to construct, launch and operate future prototype spacecraft. Data that does not reach BA due to a lack of ground infrastructure is forever lost, and will hinder its spacecraft development program; time is truly of the essence here.

With only a single ground station online, the current ability of BA's engineering staff to download data from Genesis is significantly constrained. As originally authorized, BA's experimental license anticipated the use of two tracking and data collection Earth stations, with the possibility of adding up to three additional locations (ultimately, BA chose to develop its second and third stations in Hawaii and Alaska rather than Fairfax, Virginia, as originally authorized, because these locations provide for superior access/communication with the spacecraft). Currently, and since the Genesis-1 launch in July, BA has been receiving only half of the spacecraft health and telemetry data originally intended. Moreover, with each day that passes, important collection and monitoring capacity may be lost (*i.e.*, both on-board camera capability and data-collection sensors have deteriorated and will continue to do so during the course of the mission).

Fortunately, Bigelow Aerospace has the opportunity to activate two additional ground station facilities in the near term that can close the data collection gap by, at a minimum, tripling the amount of data that can be collected during the remainder of the Genesis-1 mission. One or both of these new Earth stations will be ready to commence operations by December 1, 2006. Without these additional ground stations, critical spacecraft performance data will be lost. This lost data cannot be reproduced, and the inability to collect it now will adversely impact BA's future experimental program. Accordingly, Bigelow Aerospace respectfully requests expedited processing of its above-referenced application, and urges your Office to grant the same on or before November 30, 2006 to enable BA to commence operations on December 1, 2006.



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Should there be any questions regarding this request, please contact the undersigned counsel.

Respectfully submitted

Raul R. Rodríguez

David S. Keir

*Counsel to Bigelow Development
Aerospace Division, LLC*

cc: Anthony Serafini