### Blue Origin Texas, LLC

EXHIBIT #1: Blue Origin Texas, LLC DATE: October 25, 2017 FCC File Number: 0829-EX-CN-2017

Application for New Experimental Radio Station Authorization (FCC Form 442)

#### TYPE OF APPLICANT:

Blue Origin Texas, LLC is a limited liability company formed under the laws of the State of Texas.

#### **QUESTION 6: STATEMENT OF RESEARCH PROJECT**

(a) Blue Origin is an aerospace research and development company developing commercial space launch vehicle technology. Blue Origin conducts flight testing of these vehicles at its private test facility in Culberson County, Texas. This test facility is in the sparsely-populated desert of Western Texas, approximately 25 miles north of the town of Van Horn.

(b) The FCC license applies to telemetry between ground stations and aerial vehicles that are being built by Blue Origin. A telemetry and command radio link is required to send instructions to and receive data from the aerial vehicles in real time while they are on the ground and in flight undergoing testing. This application is for the consolidation of two previous licenses covering four total frequencies to support two vehicles that separate in flight.

(c) For the downlink frequencies between 2200 to 2290 MHz this application only covers ground testing. Separate applications will be filed for transmissions of the vehicles in flight.

Exhibit 1

#### **DESCRIPTION OF DIRECTIONAL ANTENNA OPERATION**

The transmit signals for the vehicle 1 and 2 uplinks at 2069.1 and 2042 MHz are sent by 6foot tracking parabolic dish antennas. At 2042 or 2069.1 MHz, the beamwidth of these antennas are six degrees. For a given flight, the antennas will be located within 24 miles of the launch pad, which is at 31 25' 22.99" N, 104 45' 26.01" W (see West Texas Launch below). The parabolic dish antennas will slew during the flight in order to track the current location of the two vehicles. Therefore, the orientation of the antenna throughout the flight of the vehicles will vary depending on the vehicle locations.

# LENGTH OF TIME THAT WILL BE REQUIRED TO COMPLETE THE PROGRAM OF EXPERIMENTATION:

Blue Origin is developing a series of launch vehicles. Extensive flight testing is planned for multiple vehicles for more than a 5-year period (see #6, above). Blue Origin plans to use the telemetry equipment on multiple test vehicles over the course of a 5-year period following receipt of the license sought in this application.

## Blue Origin Texas, LLC

### Exhibit 1



