

**The Boeing Company
Thuraya Satellite Testing
Building S-03A, Chamber A6
El Segundo, CA**

Submitted on

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By

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Purpose

The purpose is to test the satellite transmitters.

Why we are applying for an STA

The C-band downlink (from the satellite) emissions radiate within the A6 Chamber. The chamber does not provide adequate shielding effectiveness in this band therefore an STA is required to perform the tests.

Component being Tested

The article under test is the Thuraya Satellite. There are several test configurations that are required to be tested.

Schedule

Boeing is requesting a 6 month STA from April 19 to Oct 19, 2006. Boeing anticipates about 3 months of actual testing is required during the 6 month period.

Military Contracts

None. This is a commercial project.

FAA Pre-Approval

Not required.

Frequencies, Emissions and RF power

Band	Frequency MHz	Emission	Antennas *	EIRP Watts **
C	3616.0	CW-N0N	3 Types: Bicone, Pipes and Spot	10.0
C	3618.0	CW-N0N	3 Types: Bicone, Pipes and Spot	10.0

* The antennas are part of the satellite and are custom designed and manufactured by Boeing Satellite Services

** C-band radiation is mostly contained in the A6 Chamber. Worse case minimum shielding effectiveness is 10 dB at 3.6 GHz according to EM measurements and calculations. This produces a maximum 1.0 watt leak that will be reduced as much as possible, but it is unknown by what amount. Therefore, an STA is required.

Location

Boeing Satellite Development
Building S-03A, (92-033), Chamber A6
901 N Nash St
El Segundo (Los Angeles County), CA 90245-2844
33-55-43
118-23-20
WGS 84
AMSL 105 Feet

From the figure below, the location indicated by the yellow diamond symbol in the center of the map below and is south of the Los Angeles Airport by about 2,000 feet.

S-03A Exterior Building Wall Construction: All steel walls and doors, no windows.

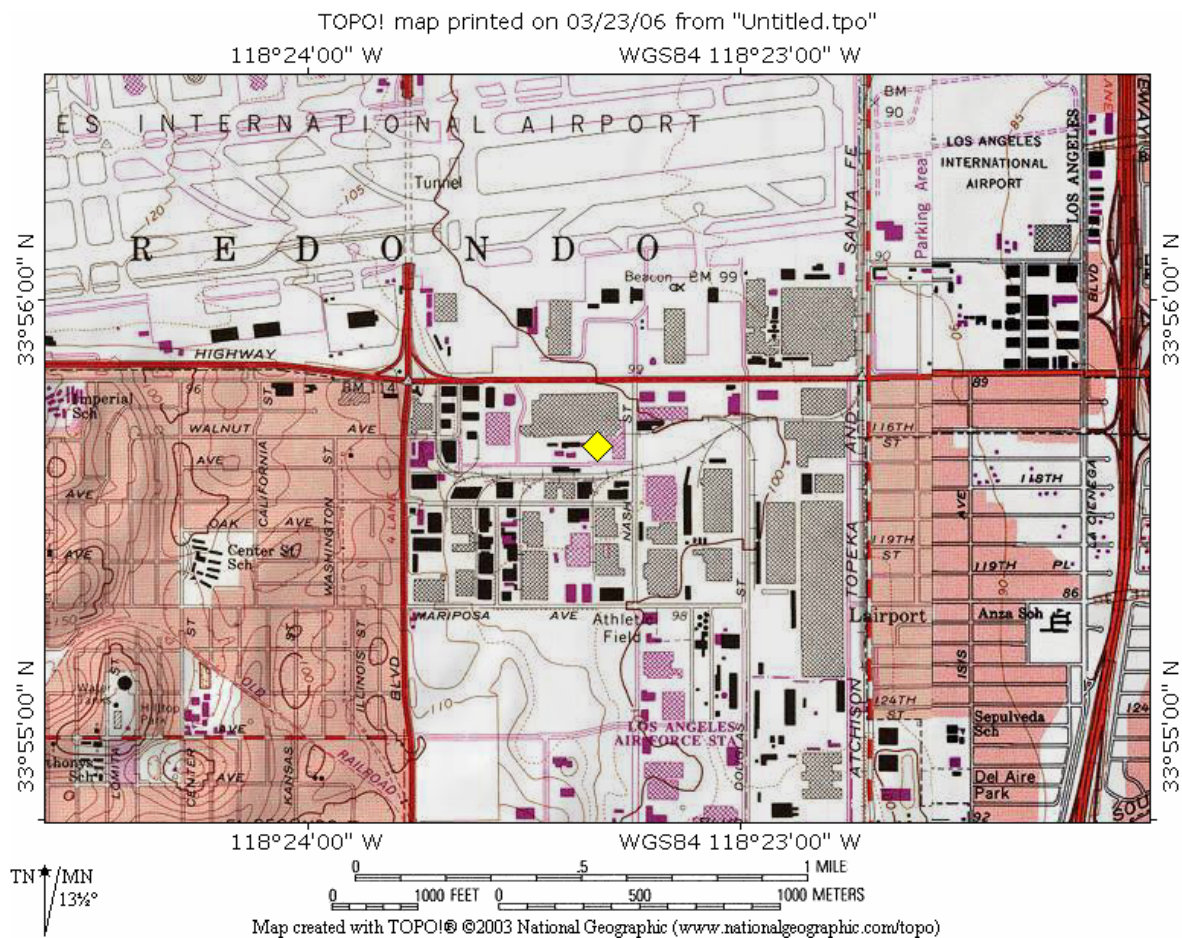


Figure 1 – El Segundo Location

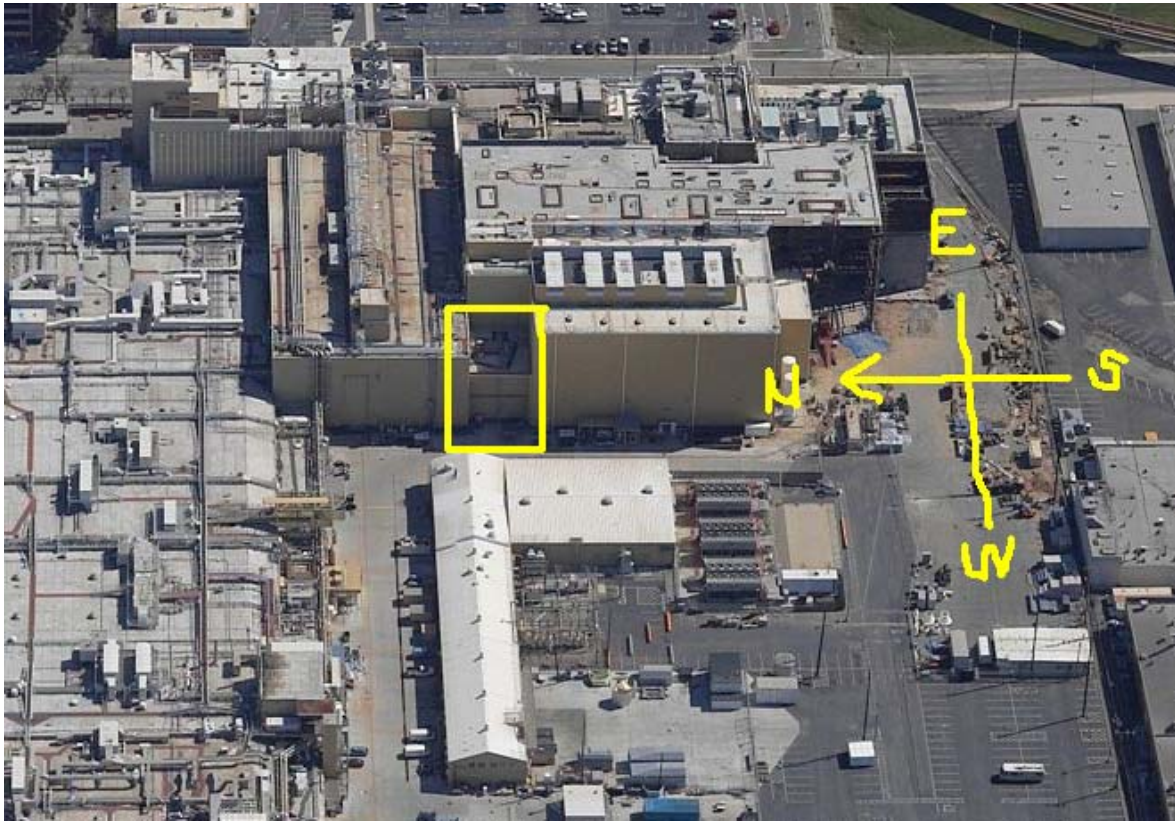


Figure 2 - Aerial Photo, west facing exterior wall and roof of the A6 Chamber

RF Test Setup Diagrams

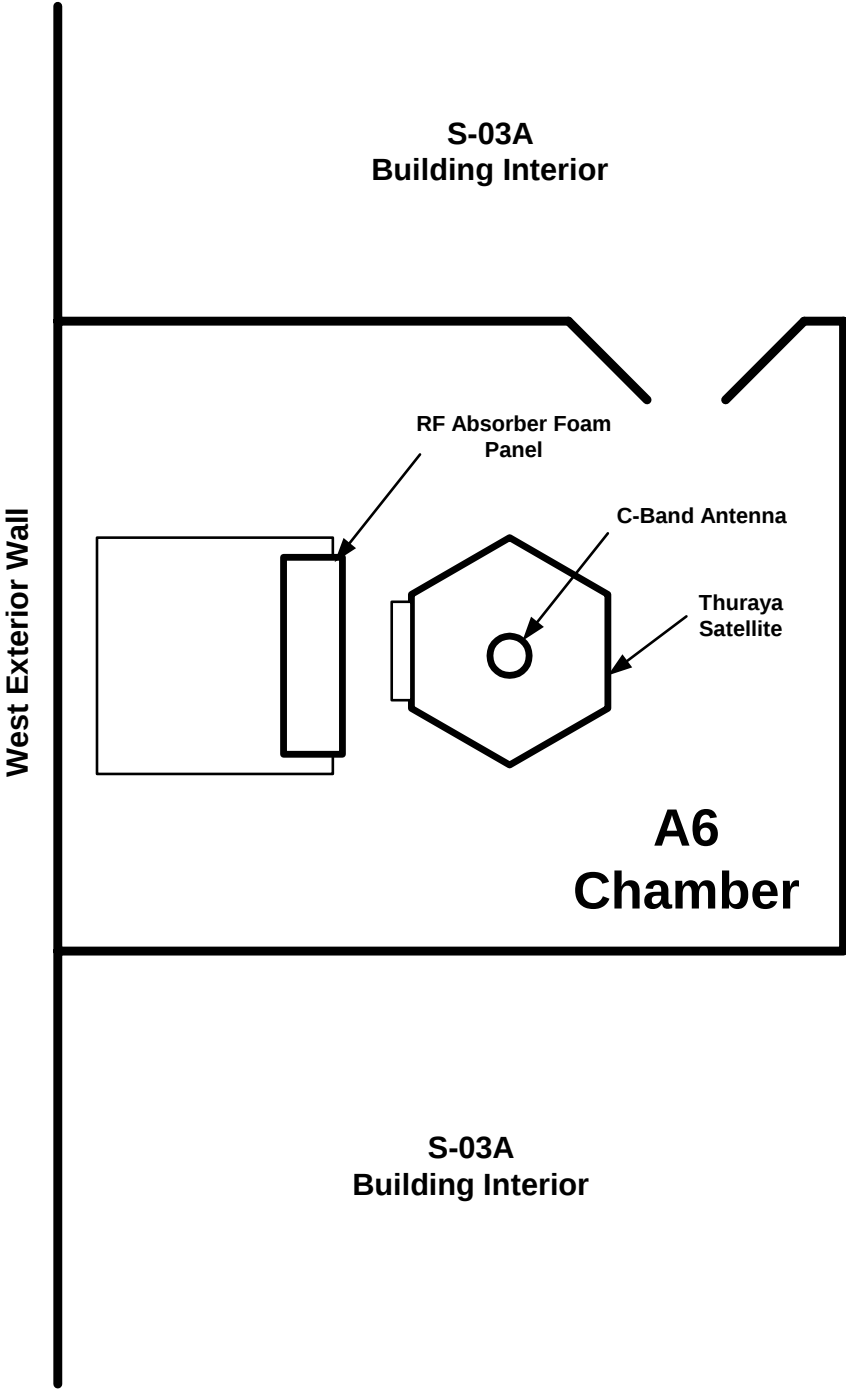


Figure 3- Thuraya Satellite Test Set Up in A6 Chamber

RF Equipment

Thuraya satellite internal transmitters.
Boeing is the current owner and operator of the equipment.

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