

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

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By
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Purpose:

As required by CFR47 Part 5.61, this experimental license is being submitted in conjunction with an STA extension of WC9XUP. This license is required to support testing of satellite transmitters at The Boeing Company satellite production facility, El Segundo, CA.

Why we are applying for an Experimental License:

The C-band downlink transmitter emissions will be radiated within the A6 Anechoic Chamber. However, the chamber does not provide adequate shielding effectiveness in this band, and therefore an experimental license is required to perform the tests.

Components being tested:

This license will support production testing of various satellite systems. There are several test configurations that are required to be tested.

Military Contracts:

None. This is a commercial project.

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.

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 N 118-23-20 W
WGS 84
AMSL 105 Feet

On the figure below, the location indicated by the yellow diamond symbol in the center of the map, 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.

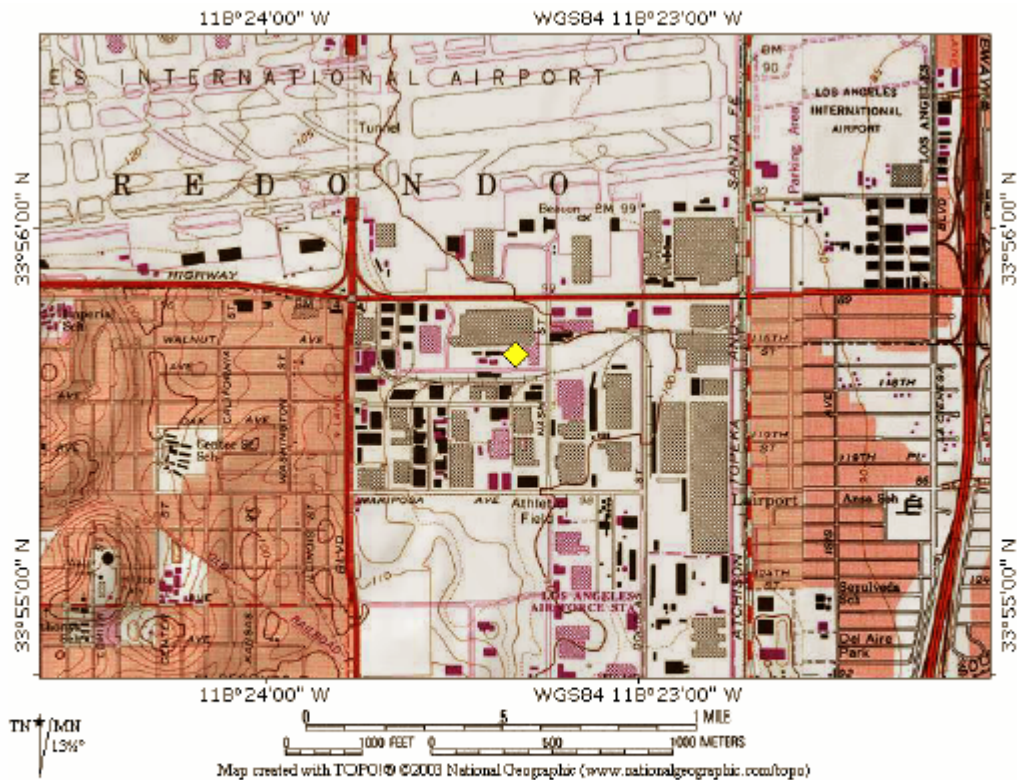


Figure 1 – El Segundo Location

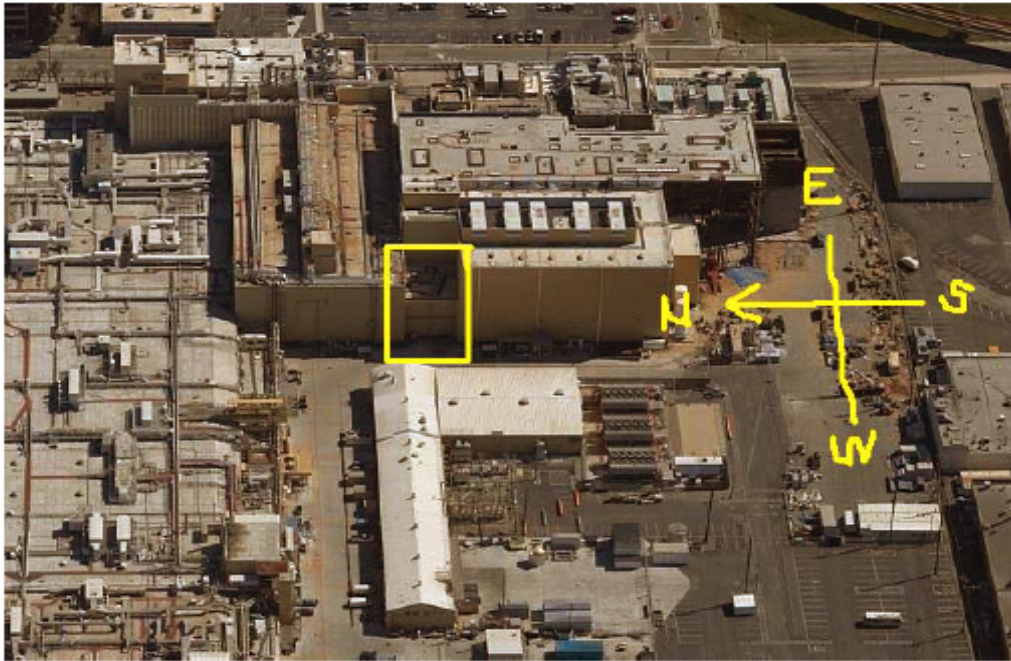


Figure 2 - Aerial Photo, west facing exterior wall and roof of the A6 Chamber

RF Test Setup Diagrams

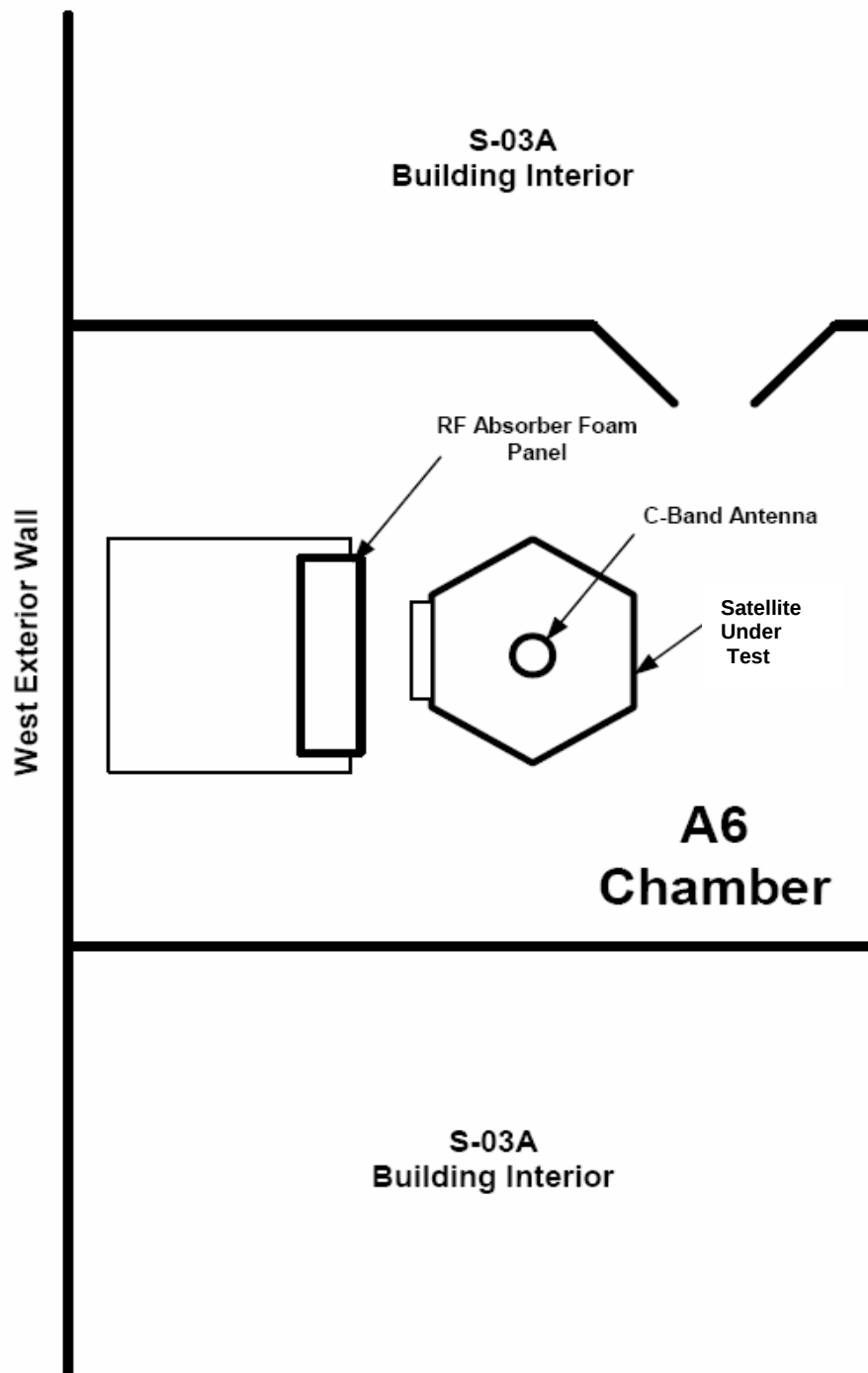


Figure 3 - Satellite Testing Configuration

RF Equipment:

The satellite internal transmitters will produce the RF signal. Boeing is the current owner and operator of the equipment.

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