#2

July 13, 2000

Federal Communication Commission
Experimental Radio Service
P.O. Box 358320
Pittsburgh, PA 15251-5320

TIMELY ACTION REQUIRED
LICENSE REQUIRED BY: October 13, 2000

Subject: Request for Special Temporary Authority (STA)

This request for an STA is submitted in accordance with the FCC rules, Part 5.56.

1. **Name and address:**

   US Sea Launch
   P.O. Box 32889
   Long Beach, CA 90832-2889

2. **Need for special action:**

   Sea Launch is required to demonstrate that the re-radiation system is fully operational before launch. The test of the re-rad link is essential because the spacecraft RF link is a launch commit criteria for Hughes at the launch site.

3. **Type of operation:**

   With the rocket erect on the Launch Platform (LP) at our pier, the re-radiation system located on the rocket will transmit to the Assembly and Command Ship (ACS) which will be located 300 meters away at the same pier.

4. **Purpose of operation:**

   To test the satellite (XM Radio 2) antenna system before departing for launch.

5. **Time and date:**

   The test will be conducted sometime during the period of October 13, 2000

469 ST 2U #3

July 13, 2000

Federal Communication Commission
Experimental Radio Service
P.O. Box 358320
Pittsburgh, PA 15251-5320

TIMELY ACTION REQUIRED
LICENSE REQUIRED BY: October 1, 2000

Subject: Request for Special Temporary Authority (STA)

This request for an STA is submitted in accordance with the FCC rules, Part 5.56.

1. **Name and address:**

   US Sea Launch
   P.O. Box 32889
   Long Beach, CA 90832-2889

2. **Need for special action:**

   Sea Launch is required to demonstrate that the re-radiation system is fully operational before launch. The test of the re-rad link is essential because the spacecraft RF link is a launch commit criteria for Hughes at the launch site.

3. **Type of operation:**

   With the rocket erect on the LP at our pier, the re-radiation system located on the rocket will transmit to the Assembly and Command Ship (ACS) which will be located 300 meters away at the same pier.

4. **Purpose of operation:**

   To test the satellite (XM Radio 1) antenna system before departing for launch.

5. **Time and date:**

   The test will be conducted sometime during the period of October 1, 2000 through

May 1, 2001.

6. **Class of station:** MO
Nature of service: XT

7. **Location:**

The testing will be conducted at our pier in Long Beach, CA.

North Latitude (DD-MM-SS):
33° 44 ' 41"
West Longitude (DDD-MM-SS):
118° 13' 28"
Radius of Operation:
300 meters

8. **List below transmitting equipment to be installed (if experimental, so state):**
Manufacturer: Hughes Spacecraft
Model Number: XM Radio-1
No. Of Units: 1
Experimental: Yes

8. **Person who can best handle inquiries pertaining to this request:**

Bill Gjertson
Engineering Technical Fellow
(425) 393-2557

9. **Frequency(ies) desired:** (29 dBm) 800 mW (ERP)

2339.136-2339.264MHz (telemetry)
2339.636-2339.764MHz (telemetry)
7048.685-7049.315MHz (command)
7073.685-7074.315MHz (command) 50 mW (ERP)

NG: FX, FX-SAT

10. **Power output to antenna:** (17dBm)

250mW for the telemetry frequencies (from the launch vehicle)
10mW for the command frequencies (from the ACS)

11. **Emission:**

128KG9D for the telemetry frequencies
630KF9D for the command frequencies

through May 13, 2001.

6. **Class of station:** MO
Nature of service: XT

7. **Location:**

The testing will be conducted at our pier in Long Beach, CA.

North Latitude (DD-MM-SS):
33° 44 ' 41"
West Longitude (DDD-MM-SS):
118° 13' 28"
Radius of Operation:
300 meters

8. **List below transmitting equipment to be installed (if experimental, so state):**
Manufacturer: Hughes Spacecraft
Model Number: XM Radio-2
No. Of Units: 1
Experimental: Yes

8. **Person who can best handle inquiries pertaining to this request:**

Bill Gjertson
Engineering Technical Fellow
(425) 393-2557

9. **Frequency(ies) desired:**

2339.136-2339.264MHz (telemetry)
2339.636-2339.764MHz (telemetry)
7048.685-7049.315MHz (command)
7073.685-7074.315MHz (command)

600 mW (ERP)
50 mW (ERP)

10. **Power output to antenna:**

250mW for the telemetry frequencies (from the launch vehicle)
10mW for the command frequencies (from the ACS)

11. **Emission:**

128KG9D for the telemetry frequencies
630KF9D for the command frequencies

12.	**Antenna Height:**	42m (antenna on the ACS)
	Antenna Type:	Parabolic Reflector
	Beamwidth:	±3 degrees (fullbeam)
	Polarization:	Linear
13.	**Antenna Height:**	85 m (antenna height above water level on the Launch Platform)
	Antenna Type:	Cavity backed spiral
	Beamwidth:	±40 degrees (fullbeam)
	Polarization:	Linear

Richard Williams
(562) 951-7394

Enclosures:
FCC Form 159

12. **Antenna Height:** 42m (antenna on the ACS)
Antenna Type: Parabolic Reflector
Beamwidth: ±3 degrees (fullbeam)
Polarization: Linear

13. **Antenna Height:** 85 m (antenna height above water level on the Launch Platform)
Antenna Type: Cavity backed spiral
Beamwidth: ±40 degrees (fullbeam)
Polarization: Linear

Richard Williams
(562) 951-7394

Enclosures:
FCC Form 159