



Telecommunications Management Group, Inc.

February 5, 2015

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20554

**Re: Application of Yazmi USA, LLC  
For Modification of License for Call Sign S2367  
File No. SAT-MOD-20141212-00129**

Dear Ms. Dortch:

Yazmi USA, LLC (“Yazmi”), by its attorneys, hereby provides information supplemental to the above-referenced modification of license application for Call Sign S2367 in response to a request received telephonically from the Commission’s International Bureau.

The Bureau requested information in eight areas from Yazmi. Yazmi’s responses are provided below:

1. Estimated Fuel Life of AfriStar-1:

Afristar-1 was launched in October 1998, with an estimated fuel life of 15 years. Yazmi estimates that the current end-of-fuel life for AfriStar-1 is approximately nine months (assuming no additional inclined-orbit operation), with sufficient reserve fuel to de-orbit the spacecraft in the manner identified in the modification of license application for Call Sign S2367.

2. Estimated Service Life, if Different:

In Exhibit A to its above-reference modification of license application for Call Sign S2367, Yazmi stated that the useful life of AfriStar-1 will end in April 2021. The service life of AfriStar-1 is thus estimated to continue until April 2021. The difference between the estimated fuel life and estimated service/useful life of AfriStar-1 is attributable to Yazmi’s expectation that it will discontinue current north-south station keeping on AfriStar-1 in March 2015. In making this service-life estimate, Yazmi will maintain sufficient reserve fuel to de-orbit the satellite in the manner identified in the modification of license application for Call Sign S2367.

3. Is Movement to Another Satellite Orbit Expected?:

Yazmi has no current plans or proposals to relocate AfriStar-1 from its current orbital position at 21° East Longitude ("E.L."). As Yazmi reported in Exhibit A to its above-reference modification of license application for Call Sign S2367, Yazmi intends to permanently discontinue north-south station keeping for AfriStar-1 at the end of March, 2015, thereby extending the satellite's useful life through April 2021. The satellite is currently maintained at 1.7 degrees of inclination following a prior suspension of north-south station keeping from June 2012 to July 2014. *See* Response No. 6, below. Yazmi will provide the Commission notice of the planned new station-keeping change in the manner specified in Section 25.280 of the Commission's Rules at the appropriate time.

4. Has there been any failure on the satellite during its term of operation?:

AfriStar-1 was launched with a manufacturing defect in its solar panels, resulting in the panels collecting less power than intended.

Aside from the solar array degradation, which is accounted for in the service-life estimate above, the satellite has experienced the following two equipment failures:

1. One of the satellite thrusters has developed seepage and is no longer in use. The satellite is being operated under the redundant thruster configuration.
2. An infrared earth sensor has failed, and the redundant unit is in use.

As both equipment failures have been mitigated, the satellite subsystems remain fully functional.

There has been no failure of the satellite during its term of operation.

5. What is the cumulative solar array power performance?

From the first summer solstice after launch, i.e., June 1999, until June 2014, the available solar array power has decreased from an estimated 5,200W to approximately 4,200W.

From June 2013 to June 2014, the available solar array power has reduced from 4,235W to 4,207W, i.e., 0.66% ~ 1%.

6. What is the different in calculation in the current application from the 2008 modification? Have there been any changes in the propellant or in the orbital degree?

In reviewing the 2008 and 2014 modification of applications (File Nos. SAT-MOD-20080204-00036 and SAT-MOD-20141212-00129, respectively), Yazmi noticed a common error in both calculations. Specifically, although Yazmi used the same formula in each calculation, the “mass” parameter in the formula was incorrect in both instances.

In the 2008 modification of license application, the mass parameter was stated as being 1250 kg, and in the above-referenced 2014 modification of license application it is stated as being 1279 kg. The correct mass parameter to apply in both cases was the dry mass of the satellite as given by the satellite manufacturer, namely 1209.93 kg.

When the correct “mass” parameter is inserted into the formula, the minimum increase in de-orbiting altitude becomes 291.6 km, and the final disposal altitude as per Section 25.283 of the Commission’s Rules shall be  $36,021 \text{ km} + 291.6 \text{ km} = 36,312.6 \text{ km}$ . Yazmi estimates the amount of propellant kept in reserve (~6 kg) would allow the de-orbiting altitude to exceed the computed minimum.

As of this date, AfriStar-1 is stationkept to the parameters (both east-west and north-south) in its authorization. From June 2012 until July 2014, Yazmi suspended north-south station keeping on AfriStar-1, which resulted in a current spacecraft inclination of 1.7 degrees. Station keeping in the north-south direction was resumed on July 6, 2014. As noted above, Yazmi intends to again cease north-south station keeping for AfriStar-1 at the end of March, 2015, and will provide the Commission notice of this change in the manner specified in Section 25.280 of the Commission’s Rules at the appropriate time.

7. The application states that Yazmi is using Intelsat for its TTC. Are they transmitting from US earth stations? If so, to include the call signs for those.

In Exhibit A to its above-reference modification of license application for Call Sign S2367, Yazmi stated that TT&C transmissions to AfriStar-1 originate from Intelsat’s East Coast Operations Center in Tysons Corner, Virginia, and from the redundant Intelsat West Coast Operations Center in Long Beach, California. The actual earth stations used to make the TT&C transmissions are located in Mauritius and Bangalore, India, respectively. The earth stations are operated remotely by Intelsat from its U.S. operations centers.

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8. Is Noah Samara the sole owner of the Afristar satellite?

No. Mr. Samara owns 99% of Yazmi. The remaining 1% is owned equally by Eyob Samara and Rahel Samara, both of whom are U.S. citizens.

Please direct any questions you may have on the answers provided above to me.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'JH', is centered on the page.

Janet Hernandez  
Counsel for Yazmi USA, LLC

cc: Clay DeCell, International Bureau (by email)