



January 8, 2010

**BY ELECTRONIC FILING**

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

Re: *IBFS File No. SES-LIC-20091001-01263*

Dear Ms. Dortch:

DIRECTV Enterprises, LLC (“DIRECTV”) hereby submits additional information to supplement the above referenced application for authority to operate a 17/24 GHz BSS earth station antenna at DIRECTV’s Northwest Uplink facility (“NWUF”) to address the issue of potential interference to terrestrial licensees operating in the 24.75-25.15 GHz band. Because satellite and terrestrial wireless licensees operate on a co-primary basis in this band, the Commission has established specific coordination rules, including a threshold below which no coordination is necessary. As demonstrated below, DIRECTV’s proposed operations would fall below that threshold even under worst-case assumptions, and therefore no coordination is required.

Under Section 25.203(l) of the Commission’s rules, feeder link earth stations operating in the 25.05-25.25 GHz band can only be licensed in Economic Areas (“EA”) where no existing terrestrial fixed service (“FS”) licensee has been authorized, and feeder link operations must be coordinated with FS licensees in nearby areas if the power flux-density (“PFD”) of the feeder link transmitted signal is equal to or greater than  $-114 \text{ dBW/m}^2/\text{MHz}$  at the boundary of the FS licensed area.<sup>1</sup> The proposed earth station is located in Yakima County, WA, which is in EA 169. According to the Commission’s ULS database, there are no FS licensees in that EA authorized to operate in the relevant band. The closest FS licensees in the 24.75-25.15 GHz band are licensed for the Seattle-Everett, WA SMSA (call signs WMF 854 and WMT 323) which includes King and Snohomish counties, and the Portland, OR-WA SMSA (call signs WMF 842 and WMT 321) which includes Clark, Multnomah, Washington, and Clackamas counties. Shown below is a map illustrating the location of DIRECTV’s NWUF and showing the shortest distances from that location to the boundaries of the two closest counties in these SMSAs (King and Clark counties, respectively).

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<sup>1</sup> See 47 C.F.R. § 25.203(l).



Presented below is a worst case analysis of the NWUF feeder link PFD at the closest boundaries of King and Clark counties based on the distances shown in the map above. Note that this worst case analysis assumes free space path loss, as specified in Section 25.203(1)(2). This analysis also assumes a maximum transmit power of 83 dBW per 36 MHz carrier from NWUF, as specified in the application. The analysis demonstrates that even under these worst case assumptions, the PFD from the proposed earth station's transmissions would fall below the coordination threshold of  $-114 \text{ dBW/m}^2/\text{MHz}$ , with 4.4 dB of margin for King County and with 8.7 dB of margin for Clark County. As such, pursuant to Section 25.203(1), there is no need for

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DIRECTV to coordinate the operations of its NWUF earth station with the FS operators licensed in these neighboring SMSAs.

<b>24 GHz BSS Feeder Link Antenna Parameters</b>	<b>King County</b>	<b>Clark County</b>
Max EIRP/carrier from FCC application (dBW)	83.0	83.0
Antenna size (m)	9.2	9.2
Antenna on-axis gain (dBi)	65.4	65.4
Max power into antenna (dBW)	17.6	17.6
Bandwidth normalizing factor for 36 MHz carrier (dB)	15.6	15.6
Max power density into antenna (dBW/MHz)	2.0	2.0
Max gain towards the horizon (dBi) (§25.209)	-10.0	-10.0
Max EIRP density towards the horizon (dBW/MHz)	-8.0	-8.0
Min distance to EA border (km)	93.4	153.0
Spreading loss over min distance to EA border (dB-m <sup>2</sup> )	110.4	114.7
Max PFD at EA border (dBW/m <sup>2</sup> /MHz)	-118.4	-122.7
Margin in FS protection (dB)	4.4	8.7

**Calculation of NWUF Feeder Link PFD at License Area Borders**

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

/s/

William M. Wiltshire  
*Counsel to DIRECTV Enterprises, LLC*

cc: Andrea Kelly  
Shahnaz Ghavami