

Proposed Minor Modification W246DI at Wolfeboro, NH

Facility ID 145595

Technical Statement

74.1204 Study

Nearby facilities studied include:

<u>Call Sign</u>	<u>Location</u>	<u>Channel No.</u>
WMLL	Bedford, NH	243A
WQSO	Rochester, NH	244A
WJZF-LP	Standish, ME	246LP100
W246BP	Exeter, NH	246D
WOKQ	Dover, NH	248B

Figures 1 and 2 illustrate the absence of prohibited overlap between the proposed translator interfering contours and the pertinent service contours of all facilities except WOKQ. (Key: same colors may not overlap.)

The proposed new site lies within the 54 dBu service contour of WOKQ. Therefore, the applicant hereby respectfully requests a waiver pursuant to 74.1204(d) as described below.

As shown in Figures 1 and 2, WOKQ places a 63.5 dBu service contour over the proposed site. The Commission has generally considered overlap from a proposed translator interfering contour to be acceptable where the ratio of undesired to desired signal (U/D) does not exceed 40 dB i.e. where in the instant case the proposed translator interfering signal does not exceed 103.5 dBu.

Interference Protection to All Nearby Residences, Businesses, and Roadways

The proposed translator facility will operate with an ERP of 0.25 kW (V only.) For an ERP of 0.25 kW, the distance to the 103.5 dBu F(50,10) contour in free space is 741 meters.

The proposed directional antenna is a Nicom BKG-1/P vertical dipole oriented at 272° True with the center of radiation at 44 meters above ground level. The proposed site is at the end of a lightly traveled road in a rural area, and the directional pattern is such that no residences, workplaces, or major roads lie within the proposed 103.5 dB F(50,10) interfering contour, as shown in Figure 2.

The antenna field values, ERP, and the distance to the 103.5 dBu interfering contour to WOKQ along azimuths toward each nearby residence are tabulated in Figure 3. As illustrated, this contour falls far short of any residence or major road.

The applicant therefore believes its application meets the requirements of Section 74.1204(d) with respect to “other factors” insuring no actual interference to WOKQ.

Environmental Considerations

No change in antenna location is proposed. The proposed antenna will be mounted on an existing tower with no new construction. RFR compliance was determined through the use of the RF worksheets in Appendix A. The applicant will cease operation or reduce power as necessary, in order to prevent uncontrolled or controlled exposure in excess of the guidelines of OET-65.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "D. Jackson", with a stylized flourish at the end.

Dennis Jackson
Technical Consultant
January 10, 2020

Figure 1 – 74.1204 Study

**Proposed 60 dBu service contour (green) lies entirely within
25 mi of proposed primary station WASR(AM) (grey.)**

**Proposed interfering contours do not overlap pertinent service contours of any station
except WOKQ, whose 63.5 dBu service contour (light blue) encompasses the proposed site.**

(Key: Same colors may not overlap.)

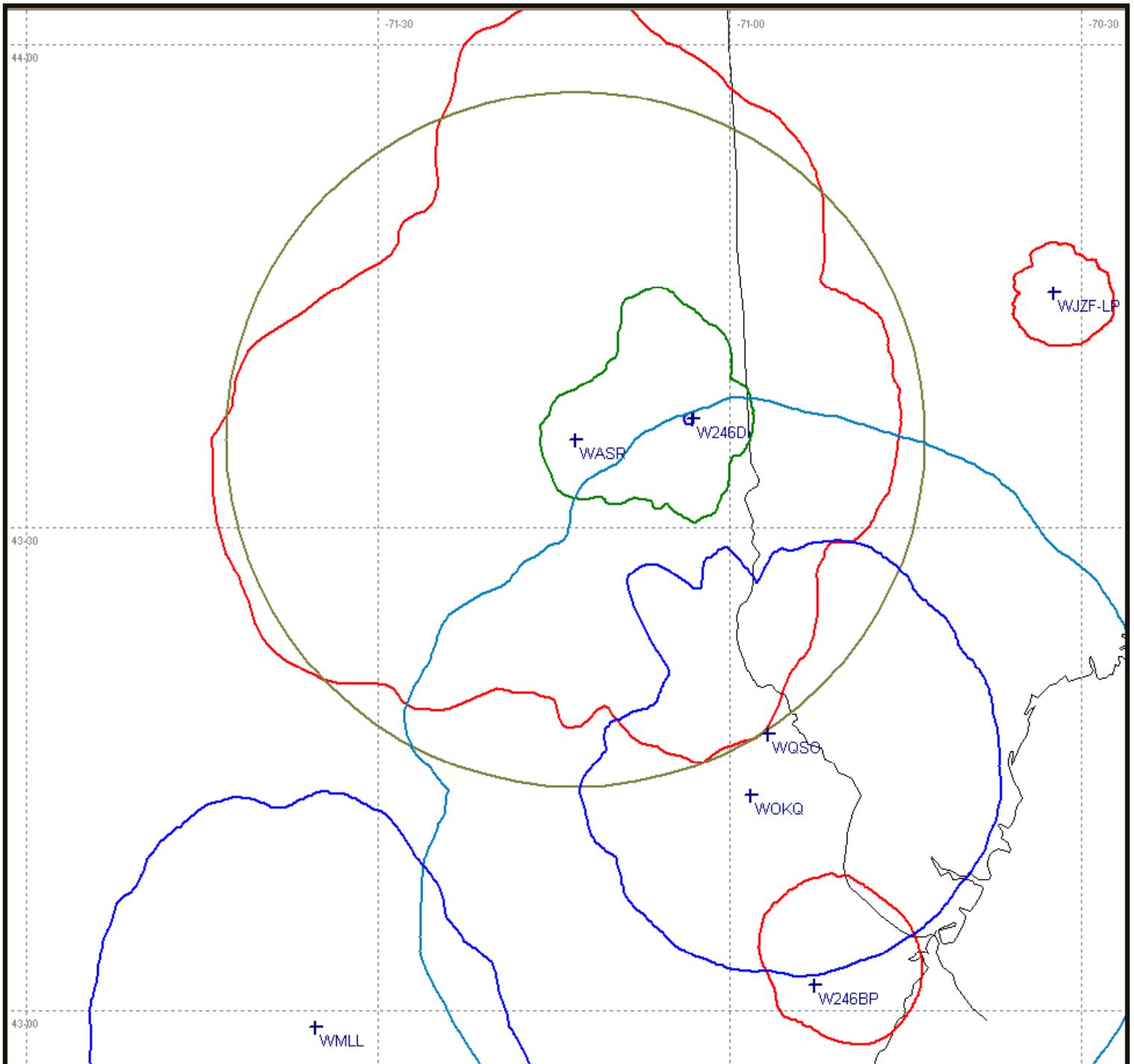


Figure 2 – Aerial View of Proposed Antenna Site Vicinity

Showing residences within 741 meters (2431 feet) of proposed site.

(Source: Google Earth)



Figure 3 – Protection of Area Residences From Interference to WOKQ

**Due to antenna directional characteristics,
the proposed 103.5 dBu F(50,10) Interfering Contour to WOKQ
falls no less than 157 meters from any area residence or major road.**

Residence	Distance (meters)	Azimuth (degrees)	Antenna Field	ERP (Watts)	Distance to 103.5 dBu (meters)	Safety Margin (meters)
1	305	55	0.159	9.9	148	157
2	640	10	0.452	28.3	249	391
3	604	90	0.161	10.1	149	455
4	768	145	0.200	12.5	166	602