

EXHIBIT 12 – COMPREHENSIVE TECHNICAL EXHIBIT

Applicant seeks to modify facility K286CH to change from a non-directional to a directional antenna system, change the Center-of-Radiation above mean sea level (CORAMSL), reduce the effective radiated power (ERP), and specify this unit as a “fill-in” translator for primary station KIKX (FM), Ketchum, ID.

LACK OF CONTOUR OVERLAP

The following study (**Figure 1**) reveals the lack of any contour overlap with 1st, 2nd, 3rd adjacent and I.F. related facilities, excepting KIKX, which is the primary station.

As a “fill-in” translator for KIKX, operating on a 2nd adjacent channel, operation of K286CH is permitted under 74.1203(d) of the commission’s rules. Intervening mountainous terrain and distance between K286CH and the principal community (Ketchum, ID) (see **Figure 2**) prevents any interference to the primary station’s signal in the City of License.

(NOTE: All contour calculations reflect the use of the NED 03 SEC terrain database)

K286CH MINOR MODIFICATION Iliad Media Twin Falls, LLC											
REFERENCE 42 33 45.0 N. 114 32 34.0 W.		CH# 286D - 105.1 MHz, Pwr= 0.19 kW DA, HAAT= 64.6 M, COR= 1233 M Average Protected F(50-50)= 9.8 km Standard Directional						DISPLAY DATES DATA 06-14-19 SEARCH 06-18-19			
CH CITY	CALL	TYPE STATE	ANT ID	AZI. ←	DIST FILE #	LAT. LNG.	Pwr(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
286D Twin Falls	K286CH!	LIC	C ID	0.0 0.0	0.00 BLFT20141113AFS	42 33 45.0 114 32 34.0	0.250	1229	---Reference--- Iliad Media Twin Falls, L1		
286C Boise	KJOT	LIC	CX ID	317.0 135.9	182.97 BMLH20050511ABI	43 45 18.0 116 05 52.0	53.000 789	196.7 2188	93.0 Lotus Boise Corp.	-29.9*	37.5
284C Ketchum	KIKX	LIC	C ID	21.5 201.8	85.73 BMLH20061114ABQ	43 16 45.0 114 09 14.0	100.000 481	13.4 2000	90.9 Iliad Media Twin Falls, L1	58.4	-6.2*
PRIMARY STATION											
286C American Fork	KUDD	LIC	C UT	136.6 318.2	287.43 BLH201511130CJH	40 39 35.0 112 12 05.0	22.000 1243	204.2 2831	95.5 Broadway Media Ls, LLC	74.1	169.8
233C1 Sun Valley	KSKI-FM	LIC	CX ID	5.6 185.7	120.68 BLH20130930BUY	43 38 37.0 114 23 50.0	2.500 583	133.9 2658	57.1 Rp Broadcasting Ls, LLC	21.5R	99.2M
Terrain database is NED 03 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3 rd adjacent. All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected. Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X) “*”affixed to ‘IN’ or ‘OUT’ values = site inside restricted contour. « = Station meets FCC minimum distance spacing for its class.											

FIGURE 1

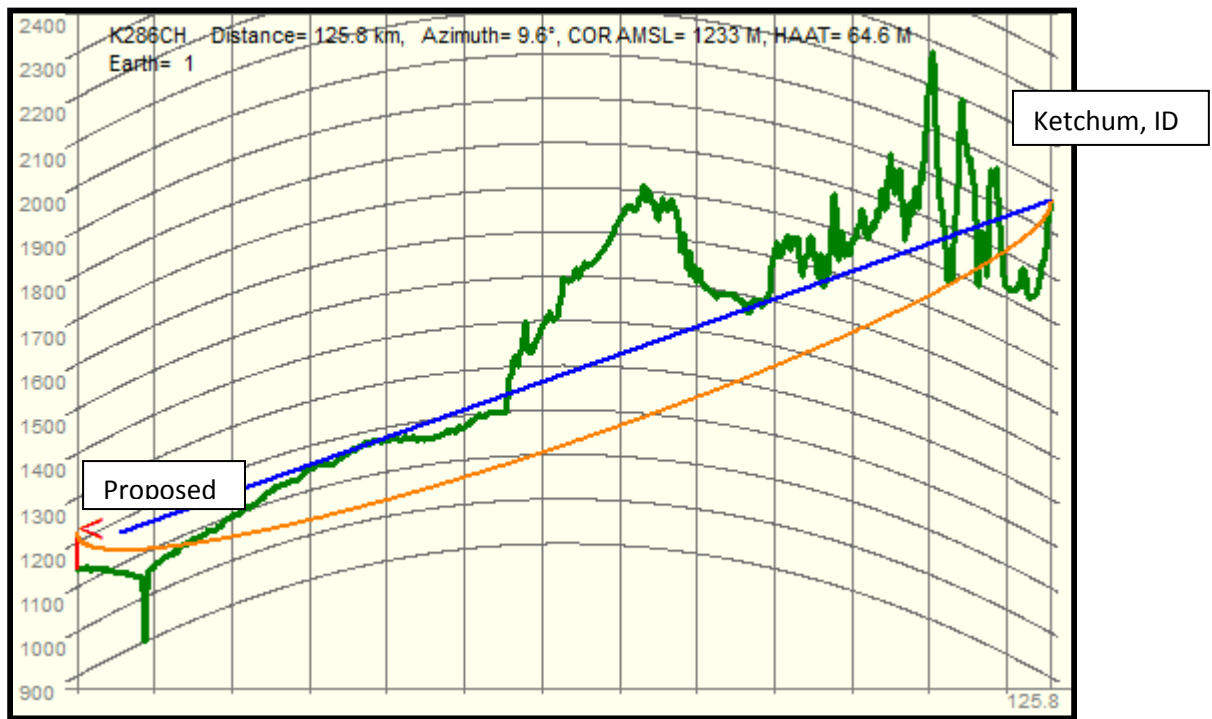


FIGURE 2

“FILL-IN QUALIFICATION”

Figures 3 & 4 below illustrate the fact that the proposed fill-in FM translator’s 60 dBu contour lies completely within the 60 dBu contour of primary station KIKX, Ketchum, ID.

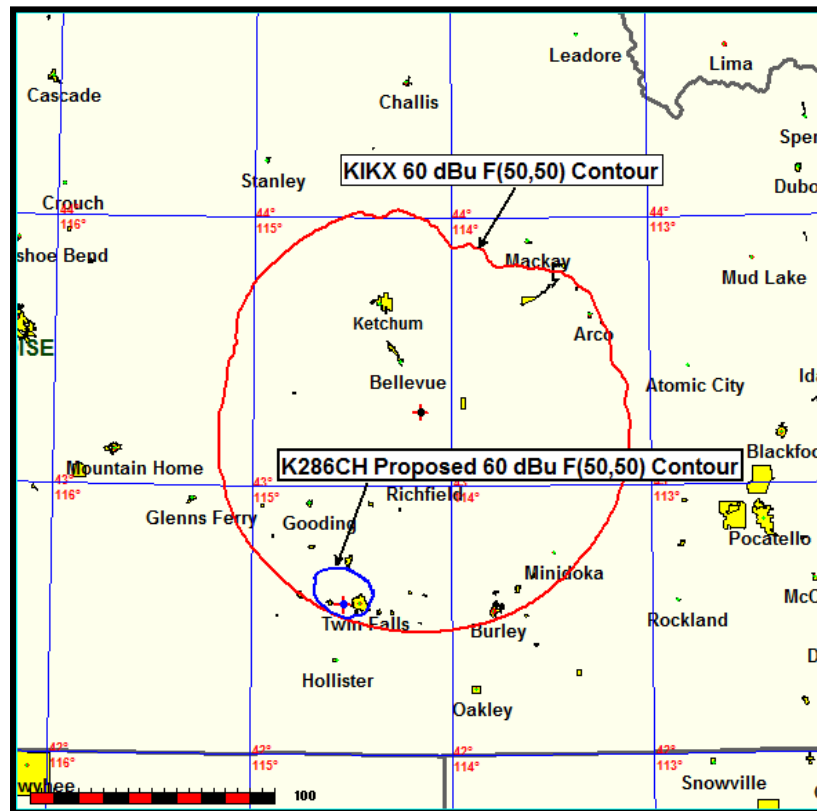


FIGURE 3

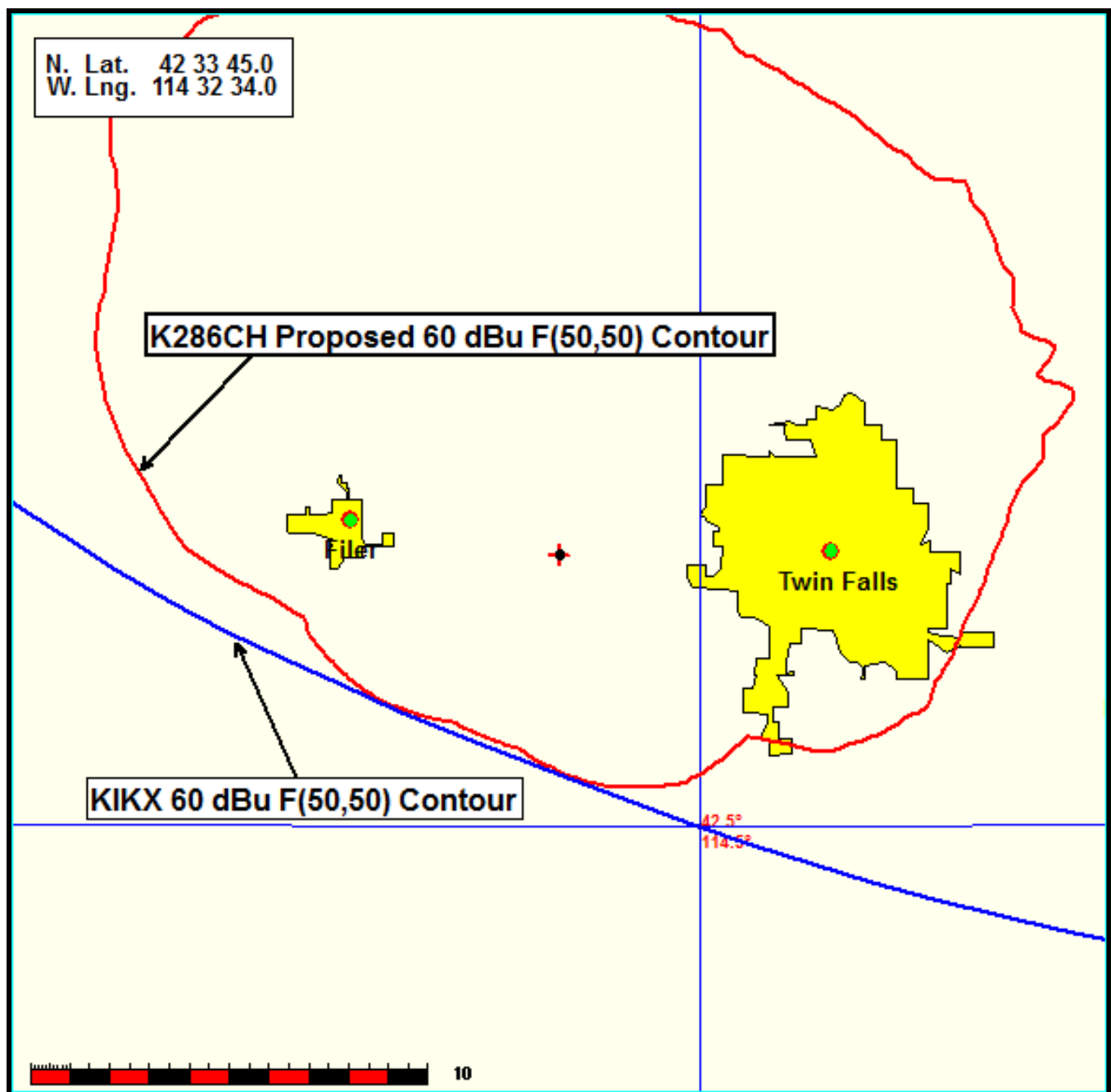


FIGURE 4

ENVIRONMENTAL COMPLIANCE

The proposed facility will be located at an established communications site on an existing support structure (ASR # 1021395). There will be no new construction.

The proposed facility complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments as set forth under §1.1307(b)(3) of the Commission's rules and the guidelines for RF radiation protection guidelines as set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01). The site is intended to house multiple transmitters, therefore the potential for human exposure to non-ionizing radiofrequency radiation has been evaluated with regard to the §1.1307(b)(3) "five percent (5%) contribution rule" utilizing the Commission's own FM Model web-based software application. The use and implementation of this FCC sanctioned software is a matter of record before the Commission.

With regard to the "five percent (5%) contribution rule", §1.1307(b)(3), five percent (5%) of the maximum permissible 200 $\mu\text{W}/\text{cm}^2$ uncontrolled limit yields a threshold value of 10 $\mu\text{W}/\text{cm}^2$. Five percent (5%) of the maximum permissible 1000 $\mu\text{W}/\text{cm}^2$ controlled limit yields a threshold value of 50 $\mu\text{W}/\text{cm}^2$. Therefore, single contributions of $\leq 10 \mu\text{W}/\text{cm}^2$ remain within the tolerances as allowed by §1.1307(b)(3) and its governing OET Bulletin No. 65 (Edition 97-01) for the more restrictive of these two protections.

The proposed Channel 286 – Twin Falls, ID analog FM Translator (Facility ID: 151707) will operate on CH286 (105.1 MHz) with 0.190 kW ERP circular polarization (H&V). The proposed operation will broadcast from an antenna COR mounted 99 meters above ground level (AGL). For purposes of this RF Compliance Study, a worst case one bay EPA Type 1 element as defined by the Commission's own FM Model - Appendix B (issued March 31, 2016) has been assumed. Application of these parameters using the FCC's FMModel software yields a worst case total of 0.8120 $\mu\text{W}/\text{cm}^2$ at 26 meters from the base of the tower (See **Figure 5** below). This is well below the 5% contribution threshold.

To ensure complete protection, the maximum FM contribution has been assumed without regard to any restricted access fencing distance. In addition, the facility is, or will be, properly marked with signs. Furthermore, coordination with other users of the site will be secured to reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines



FIGURE 5