

**TECHNICAL STATEMENT  
IN SUPPORT OF A REQUEST FOR  
SPECIAL TEMPORARY AUTHORIZATION  
KXLT-TV 113 KW-DA 340.6 M HAAT CH. 46  
ROCHESTER, MINNESOTA**

**INTRODUCTION**

Sagamorehill of Minnesota Licenses, LLC (the “Applicant”), the licensee of digital television station KXLT-TV Channel 46, Facility ID No. 35906, requests special temporary authorization (STA) to operate KXLT-TV on Channel 46 with parameters at variance from those specified on the current station license using an emergency antenna pursuant to 47 CFR §73.1680. The broadband panel antenna system that KXLT-TV currently employs was recently damaged by a lightning strike and, as a result, the station is only able to transmit at reduced power using the lower half of the panel array. Because the station is in the process of modifying its existing facility to operate on the new post-auction channel, the Applicant seeks authority to continue broadcasting in this manner as an interim facility until repairs to the antenna are made and the station is ready to transition to its new channel.<sup>1</sup> This emergency antenna configuration further entails a slightly lower radiation center height than the station’s normal licensed facility. The technical operating parameters for the proposed STA facility are described in greater detail below.

**INTERIM ANTENNA AND OPERATING PARAMETERS**

As stated above, the Applicant intends to continue operation of KXLT-TV on Channel 46 at reduced power using an emergency antenna until the station is able to commence full power operation on its post-auction channel. The station’s licensed antenna is a horizontally polarized Dielectric Model TUP-C2-6-1 and because a lightning strike has temporarily impaired this antenna such that only the lower half can be used, the maximum effective radiated power (ERP) that is currently possible is 113 kW. The construction phase for transitioning KXLT-TV to its post-auction reassignment channel is September 14, 2018 thru November 30, 2018.<sup>2</sup>

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<sup>1</sup> KXLT-TV was reassigned to Channel 26 through the Incentive Auction and TV Repack process. The station is currently authorized by construction permit to buildout its post-auction facilities, see FCC File No. 0000027876. The Applicant intends to complete the transition to Channel 26 on or about October 17, 2018.

<sup>2</sup> KXLT-TV is in Phase 1 of the post-auction construction period.



Therefore, an STA will further enable KXLT-TV to continue operations on Channel 46 in the interim or at least until the repairs to the antenna are completed and the station is ready to commence operations on its new channel.

The radiation center height of the emergency antenna is 343.1 meters above ground level (AGL) or 754.6 meters above mean sea level (AMSL). Because the interim facility involves technical parameters that are less than the licensed facility, no extension of the existing coverage area will result in any direction. The *TVStudy* summary report provided in [Figure 1](#) demonstrates that no interference beyond the normal tolerance will be caused to the technical parameters of any operating station.

## ENVIRONMENTAL IMPACT

The proposed STA facility for KXLT-TV does not exceed the criteria outlined in 47 CFR § 1.1307(a) for certain types of facilities that may significantly affect the environment. More specifically, the station's licensed antenna system is currently located on an existing FCC registered tower that was constructed before March 16, 2001 and the temporary use of the lower half of the antenna as an interim facility for KXLT-TV will not exceed the conditions outlined in 47 CFR Part 1, App. B, § III.A.<sup>3</sup> With regard to the rules for limiting human exposure to radio-frequency (RF) energy in 47 CFR § 1.1307(b), this proposal to operate KXLT-TV on a temporary basis using an emergency antenna system complies with those guidelines. The technical parameters for KXLT-TV's interim facility are listed below.

Frequency :	662 - 668 MHz (UHF Channel 46)
Antenna Type:	TUP-C2-6-1 (Directional)
Antenna Polarization:	Horizontal
Antenna Rotation:	0 degrees
Effective Radiated Power:	113 kW(H)
Location coordinates:	43-38-34.0 N, 92-31-36.0 W (NAD83)
Site elevation:	411.5 meters AMSL

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<sup>3</sup> 47 CFR Part 1, App. B, § IV.A. "An antenna may be mounted on an existing tower constructed on or before March 16, 2001 without such collocation being reviewed through the Section 106 process set forth in the NPA, unless: 1. The mounting of the antenna will result in a substantial increase in the size of the tower as defined in Stipulation I.E, above; or, 2. The tower has been determined by the FCC to have an adverse effect on one or more historic properties, where such effect has not been avoided or mitigated through a conditional no adverse effect determination, a Memorandum of Agreement, a programmatic agreement, or a finding of compliance with Section 106 and the NPA; or, 3. The tower is the subject of a pending environmental review or related proceeding before the FCC involving compliance with Section 106 of the National Historic Preservation Act; or, 4. The collocation licensee or the owner of the tower has received written or electronic notification that the FCC is in receipt of a complaint from a member of the public, an Indian Tribe, a SHPO or the Council, that the collocation has an adverse effect on one or more historic properties."



Antenna Height:	343.1 meters AGL; 340.6 meters HAAT
Overall tower height:	350.2 meters AGL
FCC ASRN:	1063897; Constructed 09/01/1998

Using the methodology for predicting power density levels for television broadcast antennas outlined in *FCC OET Bulletin No. 65, Edition 97-01*, (OET-65), the proposed facility is calculated to produce a maximum power density of  $0.32 \mu\text{W}/\text{cm}^2$  at points 2 meters above ground (approximate human head height). This exposure level was determined using 10 percent antenna relative field, which is a typical value for a UHF antenna. The maximum exposure limits applicable to Channel 46, as determined in accordance with 47 CFR § 1.1310 for uncontrolled and controlled situations, are  $441 \mu\text{W}/\text{cm}^2$  and  $2,207 \mu\text{W}/\text{cm}^2$  respectively. Because the worst-case exposure level determined for the proposed facility is not more than 5% of those guidelines and considering that the existing tower location is fenced and suitable warning signs are posted, no further showing of compliance is necessary. Accordingly, this application complies with the RF exposure limits and is categorically excluded from environmental processing by 47 CFR § 1.1306.

Steps to limit exposure to persons authorized to access the transmitter site will be consistent with the appropriate recommendations in OET-65. All maintenance and other related work to be performed at elevations higher than 2 meters above ground will be coordinated to prevent exposure to RF fields in excess of the controlled limit. Such preventative steps shall include reducing power or shutting down the facility.

Respectfully submitted,

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Attachments:  
Figure 1 – Summary of TV Study Results

## FIGURE 1

### Analysis Summary

#### TVSTUDY, VERSION 2.2.5.

Study build station data: LMS TV 2018-04-09

Proposal: KHLN-LD D10 LD APP HOUSTON, TX  
File number: KHLN-LD10 Study 1  
Facility ID: 57189  
Station data: User record  
Record ID: 384  
Country: U.S.

Build options:  
Protect pre-transition records not on baseline channel

Search options:  
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KEBQ-LP	N9+	TX	LIC	BEAUMONT, TX	BLTVL20120410AAS	147.7 km
No	KTRE	D9	DT	LIC	LUFKIN, TX	BLCDT20110613ABY	217.3
No	KLRN	D9	DT	LIC	SAN ANTONIO, TX	BLEDT20120516AAX	276.6
No	KGEN-TV	D9	DT	LIC	TEMPLE, TX	BLCDT20021010AAB	251.1
No	KLFY-TV	D10	DT	LIC	LAFAYETTE, LA	BLCDT20090622AED	322.1
No	KZTV	D10	DT	LIC	CORPUS CHRISTI, TX	BLCDT20100111ADU	292.2
No	KHPK-LD	D10	LD	LIC	DE SOTO, TX	BLANK0000029265	364.0
No	K10PL-D	D10	LD	LIC	VICTORIA, TX	BLANK0000001129	178.8
No	K10PL-D	D10	LD	CP	VICTORIA, TX	BLANK0000001204	208.4
Yes	KWTX-TV	D10	DT	LIC	WACO, TX	BLCDT20110822AEA	261.2
Yes	KHOU	D11	DT	LIC	HOUSTON, TX	BLCDT20120620ACK	0.8
Yes	KVCT	D11	DT	APP	VICTORIA, TX	BPCDT20120105ABP	175.9
No	KVCT	D11	DT	LIC	VICTORIA, TX	BLCDT20120104AAJ	175.9

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D10  
Mask: Simple  
Latitude: 29 33 45.20 N (NAD83)  
Longitude: 95 30 35.90 W  
Height AMSL: 455.6 m  
HAAT: 436.1 m  
Peak ERP: 3.00 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 0.75

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.00 kW	435.7 m	70.5 km
45.0	3.00	438.0	70.6
90.0	3.00	437.0	70.6
135.0	3.00	436.7	70.5
180.0	3.00	437.8	70.6
225.0	3.00	436.7	70.5
270.0	3.00	435.5	70.5
315.0	3.00	431.4	70.3

Distance to Canadian border: 1765.2 km

Distance to Mexican border: 422.3 km

Conditions at FCC monitoring station: Kingsville TX  
Bearing: 225.1 degrees Distance: 330.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 325.6 degrees Distance: 1468.3 km

Study cell size: 1.00 km  
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

No IX check failures found.