



## **ENGINEERING STATEMENT**

**IN SUPPORT OF**  
**APPLICATION FOR MINOR CHANGE TO A LICENSED FACILITY**  
**KNXV-TV**  
**PHOENIX, AZ**

### **Background**

Scripps Broadcasting Holdings LLC (Scripps) is the licensee of KNXV which has a license to operate a digital television facility on Ch. 15 (BLCDT-20090619ABX) at Phoenix, AZ, with an ERP of 458 kW at a HAAT of 521.0m. The tower is located at the following coordinates:

33° 20' 00.0'' N (NAD 83)  
112° 03' 49.0'' W

Scripps now wishes to “maximize” the KNXV facility ERP from 458 kW to 1000 kW; all other facility parameters will remain the same.

### **Antenna System and Tower**

KNXV will continue utilizing the current omni-directional Dielectric TFU-20GTH/VP04 antenna. The antenna is installed on a registered tower ASR#1065157 which has an overall

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height of 887.6m AMSL (with appurtenances). The antenna has center of radiation of 879.6m AMSL (with a calculated HAAT of 521.0m).

Since KNXV is not proposing to replace its current antenna, there will be no change in structure height; therefore, neither notification to the FAA nor change in ASR is required.

### **Coverage**

The entire principal community of Phoenix, AZ is well within the predicted F(50,90) 48 dBu contour based on the proposed omni-directional 1000 kW ERP.

The proposed ERP and HAAT for KNXV (1000 kW at an HAAT of 521.0m) exceeds the maximum allowed under Part 73.622(f)(8) of the FCC Rules; however, Part 73.622(f)(5) allows "Licensees and permittees...may request an increase in ERP in some azimuthal direction or antenna HAAT, or both, that exceed the initial technical facilities specified..., up to the maximum permissible limits on DTV power and antenna height set forth in paragraph (f)(6), (f)(7), or (f)(8) of this section, as appropriate, or up to that needed to provide the same geographic coverage area as the largest station within their market, whichever would allow the largest service area."

In the Phoenix DMA, the station with the largest geographic coverage area is KSAZ-TV (Ch. 10). The terrain-limited coverage areas of the licensed KSAZ-TV facility and the proposed 1000 kW KNXV facility were calculated using the FCC TVStudy software (Version 2.2.4). A selected portion of the output of the tvstudy.txt file generated by TVStudy for each station is included below:

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tvstudy v2.2.4 (Z2Qqz3)

Database: localhost, Station Data: LMS TV 2017-11-22 (11), Study: KSAZ-BLCDT20100302AAI, Model: Longley-Rice  
Start: 2017.11.27 14:05:27

Scenario Desired station	Service area		Terrain-limited	Interference-free	
Coverage KSAZ-TV D10 DT LIC PHOENIX, AZ	47137.6	4,207,660	38439.4	4,181,138	38439.4 4,181,138

tvstudy v2.2.4 (Z2Qqz3)

Database: localhost, Station Data: LMS TV 2017-11-22 (11), Study: KNXV-LIC-1000k, Model: Longley-Rice  
Start: 2017.11.27 15:08:27

Scenario Desired station	Service area		Terrain-limited	Interference-free	
Coverage KNXV-TV D15 DT LIC PHOENIX, AZ	45779.9	4,200,269	37515.0	4,180,874	37515.0 4,180,874

As can be seen from the TVStudy information, the calculated terrain-limited coverage area of the licensed KSAZ-TV facility is 38,439.4 sq. km while the calculated terrain-limited coverage area of the proposed KNXV-TV facility is 37,515.0 sq. km. Since the calculated coverage area of the proposed KNXV facility will still be less than the coverage area of the largest station in the Phoenix market, KNXV should be allowed to exceed the maximum allowable ERP and HAAT.

## Interference

An interference check study was run using the FCC TVStudy software (Version 2.2.4) for the proposed KNXV maximized facility parameters. The summary results of the study show that the proposed facility is not predicted to cause more than 0.5% new interference to any other surrounding pre-repack or post-repack co-channel or adjacent channel facilities (see attached study results).

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## **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed facility is a multi-user site and it is assumed that the site is currently “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.016102 mW/cm<sup>2</sup>, which is 5% of the MPE for public exposure (0.319333 mW/cm<sup>2</sup>) at Ch. 15 (476-482 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

Scripps agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

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### **Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

A handwritten signature in black ink, appearing to read "B. Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.  
November 27, 2017

Attached:  
KNXV TVStudy Interference Results

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## KNXV Maximization TVStudy Summary Results

Study created: 2017.11.27 15:08:26

Study build station data: LMS TV 2017-11-22 (11)

Proposal: KNXV-TV D15 DT LIC PHOENIX, AZ  
File number: KNXV-LIC-1000k  
Facility ID: 59440  
Station data: User record  
Record ID: 738  
Country: U.S.  
Zone: II

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	KPPX-TV	D14	DT	BL	TOLLESON, AZ	DTVBL26655	0.2 km
Yes	KHRR	D16	DT	CP	TUCSON, AZ	BLANK0000026323	149.5
Yes	KHRR	D16	DT	APP	TUCSON, AZ	BLANK0000034596	149.5
Yes	KHRR	D16	DT	BL	TUCSON, AZ	DTVBL30601	149.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D15  
Latitude: 33 20 0.00 N (NAD83)  
Longitude: 112 3 49.00 W  
Height AMSL: 879.6 m  
HAAT: 521.0 m  
Peak ERP: 1000 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 0.75

38.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1000 kW	540.2 m	121.9 km
45.0	1000	502.6	119.5
90.0	1000	496.2	119.1
135.0	1000	522.5	120.8
180.0	1000	535.2	121.6
225.0	1000	540.4	121.9
270.0	1000	485.1	118.4
315.0	1000	553.4	122.7

Database HAAT does not agree with computed HAAT

Database HAAT: 521 m Computed HAAT: 522 m

ERP exceeds maximum

ERP: 1000 kW ERP maximum: 456 kW

Distance to Canadian border: 1741.2 km

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\*\*Proposal is within coordination distance of Mexican border  
Distance to Mexican border: 175.9 km

Conditions at FCC monitoring station: Douglas AZ  
Bearing: 131.4 degrees Distance: 304.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 36.8 degrees Distance: 967.2 km

No land mobile station failures found

Study cell size: 2.00 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.

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