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**Engineering Statement Supporting Request
for Waiver Television Station WSEC**

Introduction

This document provides supplemental information for the planned change to move from Phase 7 to Phase 9 for WSEC. The document provides 2 areas of investigation to confirm that the proposed change will not create adverse impact on any other station.

Proposed Facility and Interference Analysis

The current construction permit contains an Effective Radiated Power (ERP) of 750 kW. Instead, WSEC has filed a new construction permit modification application with FCC file # 0000080205 which identifies a new ERP of 93.5 kW.

As such, an interference analysis of the proposed facility with 93.5 kW ERP at an RCAMSL of 492.1 meters with an omnidirectional antenna for channel 18 has been executed. The results of the study indicate no caused or received interference. (The baseline record of KETC on channel 18 indicates interference caused to WSEC but KETC has already transitioned to its post-auction channel 23, and therefore there is no interference caused to WSEC). The results of the study are attached.

Linked Station Analysis

A thorough analysis of the upstream and downstream stations associated with the linked station set for WSEC (Facility ID 70536) has been executed. Per the FCC spreadsheet on linked station neighbors, WSEC has no upstream neighbor thus no station is preventing it from moving to its assigned repacked channel. Looking at downstream neighbors, WSEC must vacate its channel before WICS (Facility ID 25686) can occupy its assigned repack channel. WICS is also slated to move to its assigned repack channel in Phase 7. WICS has agreed to coordinate with WSEC and request a phase change to Phase 9. Thus, the relationship of downstream and upstream neighbors will not change between the two stations. Additionally, WICS has no other downstream neighbor that would require WICS to vacate its channel before phase 9 occurs.

The technical conclusion summary of the above analysis indicates that there is no impact to any station based upon the proposed facility identified in FCC file # 0000080205 as long as the phase waiver for WICS is granted.

Sincerely,



President
Attachment

TVSTUDY INTERFERENCE ANALYSIS RESULTS

tvstudy v2.2.5 (4uoc83)
 Database: localhost, Study: WSEC 93.5 KW ERP, Model: Longley-Rice
 Start: 2019.08.05 23:20:19

Study created: 2019.08.05 23:20:19

Study build station data: LMS TV 2019-07-28

Proposal: WSEC D18 DT CP JACKSONVILLE, IL
 File number: WSEC 93.5 KW ERP
 Facility ID: 70536
 Station data: User record
 Record ID: 610
 Country: U.S.
 Zone: I

Search options:
 Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KWQC-TV	D17	DT	CP	DAVENPORT, IA	BLANK0000033932	219.1 km
No	KMIZ	D17	DT	LIC	COLUMBIA, MO	BLCDT20110722ADS	235.0
Yes	KETC	D17	DT	BL	ST. LOUIS, MO	DTVBL62182	128.2
No	KVTJ-DT	D18	DT	LIC	JONESBORO, AR	BLANK0000064048	446.4
No	WBXC-CD	D18	DC	CP	CHAMPAIGN/URBANA, IL	BLANK0000034661	163.9
No	WMEU-CD	D18	DC	CP	CHICAGO, IL	BLANK0000075693	324.3
No	WFWA	D18	DT	LIC	FORT WAYNE, IN	BLANK0000063130	443.7
Yes	WAWV-TV	D18	DT	CP	TERRE HAUTE, IN	BLANK0000028343	231.4
No	WKYU-TV	D18	DT	LIC	BOWLING GREEN, KY	BLEDT20040803AAG	422.7
No	KCPT	D18	DT	LIC	KANSAS CITY, MO	BLEDT20090821AAU	385.5
No	WSTR-TV	D18	DT	CP	CINCINNATI, OH	BLANK0000034777	476.4
No	WMSN-TV	D18	DT	CP	MADISON, WI	BLANK0000034381	386.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D18
 Latitude: 39 36 9.20 N (NAD83)
 Longitude: 90 2 47.40 W
 Height AMSL: 492.1 m
 HAAT: 292.4 m
 Peak ERP: 93.5 kW
 Antenna: Omnidirectional
 Elev Pattn: Generic
 Elec Tilt: 0.75

39.1 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	93.5 kW	286.5 m	79.3 km
45.0	93.5	289.5	79.6
90.0	93.5	294.8	80.1
135.0	93.5	290.5	79.7
180.0	93.5	297.0	80.3
225.0	93.5	310.4	81.7
270.0	93.5	283.6	79.0
315.0	93.5	286.8	79.3

Distance to Canadian border: 638.9 km

Distance to Mexican border: 1504.5 km

Conditions at FCC monitoring station: Allegan MI
 Bearing: 44.4 degrees Distance: 478.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
 Bearing: 277.6 degrees Distance: 1294.6 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%

 Interference to DTVBL62182 BL scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KETC	D17	DT	BL	ST. LOUIS, MO	DTVBL62182	
Undesireds:	WSEC	D18	DT	BL	JACKSONVILLE, IL	DTVBL70536	128.2 km
	WSEC	D18	DT	CP	JACKSONVILLE, IL	WSEC 93.5 kW ERP	128.2
	KWQC-TV	D17	DT	CP	DAVENPORT, IA	BLANK0000033932	340.7
	WKMU	D17	DT	CP	MURRAY, KY	BLANK0000034644	257.7
	KMIZ	D17	DT	LIC	COLUMBIA, MO	BLCDT20110722ADS	190.2
	Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX
	21576.5	2,854,495	21473.3	2,852,574	21257.4	2,846,154	0.00 0.00
Undesired			Total IX	Unique IX, before	Unique IX, after		
WSEC D18 DT BL		12.0	58	0.0	0		
WSEC D18 DT CP		12.0	58		0.0	0	
KWQC-TV D17 DT CP		16.0	166	4.0	108	4.0	108
WKMU D17 DT CP		7.9	28	4.0	4	4.0	4
KMIZ D17 DT LIC		204.0	6,306	192.0	6,226	192.0	6,226

 Interference to BLANK0000028343 CP scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired: WAWV-TV	D18	DT	CP	TERRE HAUTE, IN	BLANK0000028343			
Undesireds: WSEC	D18	DT	BL	JACKSONVILLE, IL	DTVBL70536	231.4 km		
WSEC	D18	DT	CP	JACKSONVILLE, IL	WSEC 93.5 KW ERP	231.4		
WBXC-CD	D18	DC	CP	CHAMPAIGN/URBANA, IL	BLANK0000034661	121.0		
WFWA	D18	DT	LIC	FORT WAYNE, IN	BLANK0000063130	278.7		
WKYU-TV	D18	DT	LIC	BOWLING GREEN, KY	BLEDT20040803AAG	256.2		
WMYO-CD	D18	DC	CP	LOUISVILLE, KY	BLANK0000078113	166.5		
WSTR-TV	D18	DT	CP	CINCINNATI, OH	BLANK0000034777	247.0		
Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
24063.6	708,095	23911.7	702,350	23222.3	687,716	23222.3	687,716	0.00 0.00
Undesired	Total IX		Unique IX, before		Unique IX, after			
WSEC D18 DT BL	4.0	62	0.0	0				
WSEC D18 DT CP	4.0	62	0.0	0	0.0	0		
WBXC-CD D18 DC CP	493.5	4,846	493.5	4,846	493.5	4,846		
WFWA D18 DT LIC	32.0	787	8.0	52	8.0	52		
WKYU-TV D18 DT LIC	20.0	722	0.0	0	0.0	0		
WMYO-CD D18 DC CP	64.0	3,049	24.0	1,878	24.0	1,878		
WSTR-TV D18 DT CP	159.8	7,807	103.8	6,301	103.8	6,301		

 Interference to proposal scenario 1
 2.30% interference received

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WSEC	D18	DT	CP	JACKSONVILLE, IL	WSEC 93.5 KW ERP	
Undesireds: KETC	D17	DT	BL	ST. LOUIS, MO	DTVBL62182	128.2 km
WBXC-CD	D18	DC	CP	CHAMPAIGN/URBANA, IL	BLANK0000034661	163.9
WAWV-TV	D18	DT	CP	TERRE HAUTE, IN	BLANK0000028343	231.4
Service area	Terrain-limited		IX-free		Percent IX	
20020.4	541,118	19924.7	540,495	19864.8	528,075	0.30 2.30
Undesired	Total IX		Unique IX		Prcnt Unique IX	
KETC D17 DT BL	44.0	12,392	40.0	12,327	0.20	2.28
WBXC-CD D18 DC CP	4.0	10	4.0	10	0.02	0.00
WAWV-TV D18 DT CP	16.0	83	12.0	18	0.06	0.00