

## **TECHNICAL NARRATIVE**

This Technical Statement and attached exhibits were prepared on behalf of WGUL-FM, Inc. (“WGUL”), licensee of station WXZC Channel 282C3 (104.3 MHz) Facility ID No. 71585, licensed to Inglis, Florida. WGUL herein proposed a minor change application to the facilities of WXZC to modify the license from directional to non-directional and reduce the ERP from 19.0 kW to 5.7 kW. The proposed WXZC Channel 282C3 facility is mutually exclusive with the licensed WXZC Channel 282C3 facility. WGUL is proposing to implement this change at the licensed WXZC tower site. As such, the Federal Aviation Administration was not apprised of this proposal. The tower has been registered with the Commission and assigned Antenna Structure Registration Number 1045639. The WXZC Channel 244C3 application site is located at 29 degrees 01 minutes 19 seconds North Latitude, 82 degrees 41 minutes 19 seconds West Longitude (NAD 83) and is short-spaced to WTKS-FM Channel 281C, Cocoa Beach, FL by 10.6 km. WXZC will adopt Section 73.215 contour protection with respect to WTKS-FM. There are no other short-spacings to full power FM stations from the application site. The WXZC Application Site F(50,50) 70 dBu city grade contour easily covers 100% of the Inglis, Florida corporate boundaries.

An exhibit shows the proposed WXZC proposed facility is in compliance with the Commission’s radio frequency emission limits.

**WXZC**

Inglis, FL

Latitude: 29-01-18.90 N

Longitude: 082-41-19.40 W

ERP: 5.70 kW

HAAT: 111.13 m

Channel: 282

Frequency: 104.3 MHz

AMSL Height: 114.3 m

Elevation: 3.0 m

Horiz. Pattern: Omni

Vert. Pattern: No

Prop Model: FCC Model

Loc. Variability: 50.0%

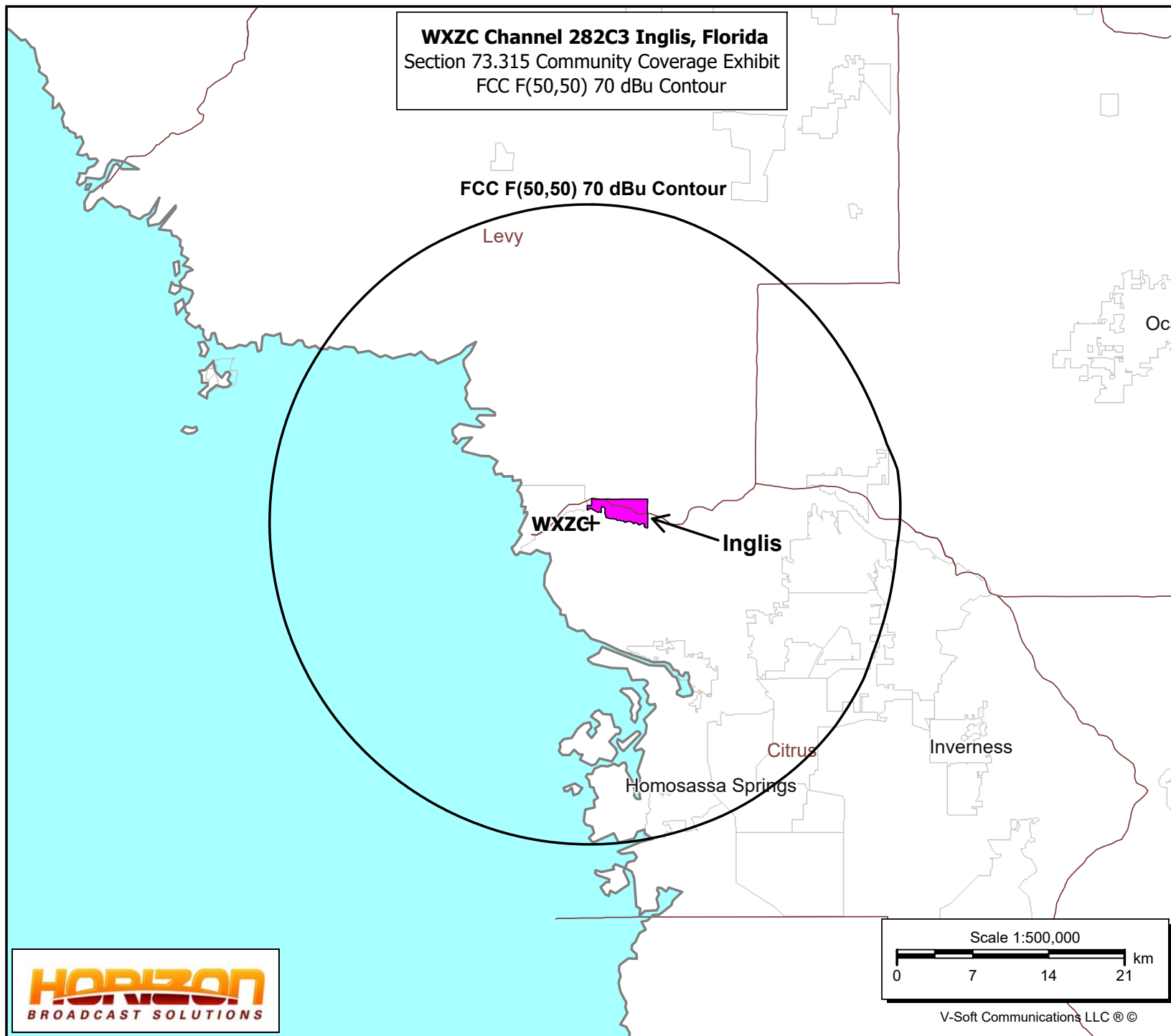
Time Variability: 50.0%

HAAT Mthd: FCC

**WXZC Channel 282C3 Inglis, Florida**

Section 73.315 Community Coverage Exhibit

FCC F(50,50) 70 dBu Contour



**WXZC Minor Mod to Non-D**

REFERENCE					DISPLAY DATES		
29 01 19.0 N.				CLASS = C3 Int = B1		DATA	08-17-21
82 41 19.0 W.				Current Spacings to 3rd Adj.		SEARCH	08-17-21
----- Channel 282 - 104.3 MHz -----							
Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
-----							
WXZC	LIC-Z 282C3	Inglis		FL 254.0	0.0	152.5	-152.5
29 01 18.9	82 41 19.4	ZCN	19.000 kW		112 M		
	Wgul-Fm, Inc.		BLH20141029AAS				
WDLN-LP	LIC 285L1	Dunnellon		FL 81.8	22.4	39.5	-17.1
29 03 01.4	82 27 38.5	CN	0.100 kW		23 M		
	Kkl Diversity Group		BLL20140826ABI				
WTKS-FM	LIC 281C	Cocoa Beach		FL 106.9	164.9	175.5	-10.6
28 34 52.0	81 04 31.2	CN	100.000 kW		487 M		
	Ihm Licenses, LLC		BMLH20031010ADD				
<b>Note: See Section 73.215 Contour Protection Exhibit - WTKS-FM</b>							
WOKV-FM	LIC 283C	Atlantic Beach		FL 37.6	176.6	175.5	1.1
30 16 34.9	81 33 52.3	CN	100.000 kW		309 M		
	Cox Radio, LLC		BMLH20130124ABI				
W282CC	LIC 282D	Zephyr Hills		FL 150.2	94.5	92.5	2.0
28 16 55.0	82 12 29.3	CN	0.250 kW 0 M				
	Radio World, Inc.		BLFT20160712AAP				
WRUF-FM	LIC 279C1	Gainesville		FL 20.4	81.4	75.5	5.9
29 42 34.9	82 23 39.4	CN	100.000 kW		234 M		
	Board Of Trustees, Univers		BLH19850820KL				
WGVC-LP	LIC 281L1	Gainesville		FL 23.7	80.7	66.5	14.2
29 41 16.8	82 21 08.3	CN	0.080 kW		34 M		
	Gainesville Seventh-Day Ad		BLL20160219ABX				
WITG-LP	CP 284L1	Ocala		FL 71.8	55.7	39.5	16.2
29 10 37.7	82 08 40.7	CY	0.011 kW		93 M		
	Witg, Inc.		0000143992				
W280DK	LIC-D 280D	Spring Hill		FL 161.4	56.8	40.5	16.3
28 32 10.0	82 30 08.3	DCN	0.250 kW 0 M				
	Hernando Broadcasting Comp		BLFT20150304ACQ				
WITG-LP	LIC 284L1	Ocala		FL 70.9	56.8	39.5	17.3
29 11 16.9	82 08 13.3	CN	0.074 kW		35 M		
	Witg, Inc.		BMLL20101025ABK				
W283DK	LIC-D 283D	Wildwood		FL 110.8	76.0	48.5	27.5
28 46 39.0	81 57 38.3	DCN	0.250 kW 0 M				
	Villages Communications, I		0000113003				
W282CI	LIC-D 282D	Tampa		FL 166.9	124.0	92.5	31.5
27 55 55.1	82 24 04.3	DCN	0.250 kW 0 M				
	Relevant Radio, Inc.		BLFT20171229AAF				
WZIG-LP	LIC 281L1	Palm Harbor		FL 182.4	101.4	66.5	34.9
28 06 29.5	82 43 52.7	CN	0.100 kW		28 M		
	Palm Harbor Radio Inc		BLL20140702AAZ				

Call	Channel	Location		Azi	Dist	FCC	Page #
Lat.	Lng.	Ant	Power		HAAT		Margin
WOGK	LIC	229C0	Ocala	FL	65.0	65.2	38.7
29 16 06.0	82 04 50.0	CN	100.000 kW		411 M	26.5	
Saga South Communications,				0000091914			
WGLF	LIC	281C0	Tallahassee	FL	321.5	203.7	41.2
30 27 04.7	84 00 41.6	CN	100.000 kW		430 M	162.5	
Cumulus Licensing LLC				BMLH20111005AJA			
WKZM	LIC-N	282C3	Sarasota	FL	174.0	194.6	42.1
27 16 31.2	82 28 53.3	NCN	25.000 kW		81 M	152.5	
The Moody Bible Institute				BLED20130607AAV			
WYGC	LIC	285A	High Springs	FL	7.1	89.3	47.8
29 49 16.9	82 34 24.4	CN	3.200 kW		137 M	41.5	
Jvc Media Of Florida, LLC				BLH20020306ABA			
WRBQ-FM	LIC-N	284C1	Tampa	FL	166.9	124.0	48.5
27 55 54.9	82 24 03.9	NCN	100.000 kW		174 M	75.5	
Beasley Media Group Licens				BLH20100122AAR			

**WXZC**

Inglis, FL  
Latitude: 29-01-18.90 N  
Longitude: 082-41-19.40 W  
ERP: 5.70 kW  
HAAT: 110.16 m  
Channel: 282  
Frequency: 104.3 MHz  
AMSL Height: 114.3 m  
Elevation: 3.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WTKS-FM**

Cocoa Beach, FL  
Latitude: 28-34-52 N  
Longitude: 081-04-31.20 W  
ERP: 100.00 kW  
HAAT: 600.0 m  
Channel: 281  
Frequency: 104.1 MHz  
AMSL Height: 612.16 m  
Elevation: 23.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

**Section 73.215 Contour Protection Exhibit**

WTKS-FM Channel 281C Cocoa Beach, FL

+ WXZC

**FCC Contours Legend:**

F(50,50) 60 dBu = Black

F(50,10) 54 dBu = Red

**HORIZON**  
BROADCAST SOLUTIONS

Citrus

Homosassa Springs

Inverness

Scale 1:250,000

0 3 6 9 km

V-Soft Communications LLC ©

**Human Exposure to Radiofrequency Electromagnetic Field  
&  
Section 106 Compliance  
(Environmental)**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. WGUL-FM, Inc. seeks to modify the license of WXZC Channel 282C3 (104.3 MHz) Facility ID No. 71585, licensed to Inglis, Florida by changing from a directional antenna to a non-directional antenna. The proposed WXZC application site will be the current WXZC licensed transmitter location. The existing tower is registered with Antenna Structure Registration (ASR) No. 1045639 and is located at 29° 04' 19" N ~ 82° 41' 19" W (NAD 83). The transmit antenna will be a side mounted ERI Model LPX-4C full wave spaced circularly polarized antenna with a center of radiation of 111.3 meters AGL. WXZC will operate with 5.7 kW ERP non-directional at 110 meters HAAT. Because WXZC proposes to operate from an existing tower and no modifications are being made to the tower, it is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The center of radiation is 111.3 meters above ground level. The ERI antenna is included in the Antenna Types in the OET's updated FM Model Program under Type 3 Opposed "U" dipole. Using the Commission's FM Model Program, the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 2.766  $\mu\text{W}/\text{cm}$  at 44.8 meters, which is 1.383 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in 1.1307(b) regarding sites with multiple emitters, which excludes applicant from responsibility for taking any corrective action in areas where the proposal's contribution is less than five percent.

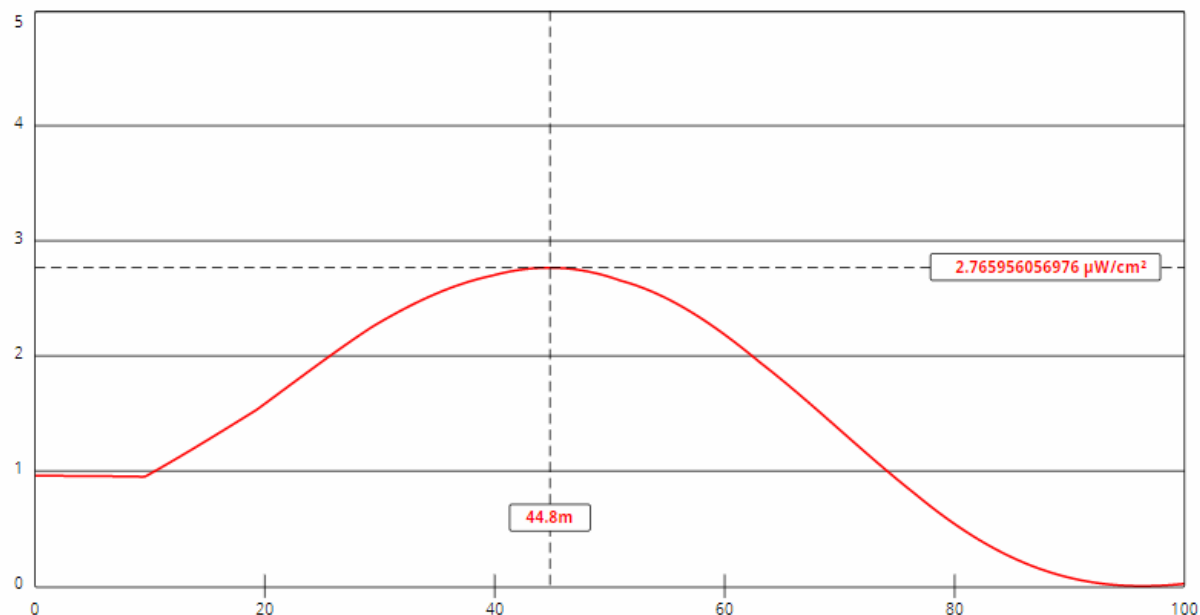
The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

# FM Model

## Radio Frequency Safety

[FCC Policy on Human Exposure](#)[RF Safety FAQ](#)[Body Tissue Dielectric Parameters](#)[RF Safety Highlighted Releases](#)[FM Model](#)

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA.

[▼ Show More....](#)[View Tabular Results +](#)

Channel Selection	Channel 282 (104.3 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	<input type="text" value="111.3"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="5700"/>	ERP-V (W)	<input type="text" value="5700"/>
Num of Elements	<input type="text" value="4"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	