

TECHNICAL EXHIBIT
DIGITAL FLASH CUT
CONSTRUCTION PERMIT MODIFICATION APPLICATION
CLASS A STATION W10BG-LP
FACILITY ID 64864
MAYAGUEZ, PR
CH 10 0.3 KW 367 M AMSL

July 28, 2009

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Technical Narrative

This Technical Exhibit supports a digital flash-cut construction permit modification application for Class A station W10BG-LP, File Number BDFCDVA-20090105AHZ. W10BG is licensed to operate on NTSC channel 10 with a directional antenna, effective radiated power (ERP) of 3 kW and an antenna height above mean sea level (RCAMSL) of 52 meters.

Station W10BG has been authorized to digital flash-cut and operate W10BG from a new transmitter site located 13.5 kilometers northwest of the current W10BG site using a directional antenna. By means of this application W10BG proposes to operate from the recently authorized new site (File Number BDFCDVA-20090105AHZ) using an omni-directional antenna with the maximum permissible power of 0.3 kilowatts. There will be overlap of the current 68 dBu and proposed 48 dBu contours.

This application is considered a "minor change" in facilities pursuant to Section 73.3572, as it relates to a digital flash-cut application and the proposed 48 dBu contour will overlap a portion of the licensed 68 dBu contour (see Figure 1).

Proposed Facilities

Station W10BG proposes to operate on digital mode on channel 10 (192-198 MHz) from the currently authorized transmitter site. An ERI model ATW2V1V-ESO-10 antenna, shown in Appendix 2, will be employed with a maximum ERP of 0.3 kW and a RCAMSL of 367 meters. The ERI antenna will be mounted at the 32-meter level on the existing 35-meter tower of FM station WIOB that according to the TOWAIR study does not require registration.

Quiet Zones and FCC Monitoring Stations

As required by FCC rules pertaining to radio Quiet Zones, Section 73.1030(a), the National Astronomy and Ionosphere Center, located at Arecibo, Puerto Rico has been notified of this application. Copy of the notification letter and of the Observatory's Letter of Consent is included in Appendix 1.

The closest FCC Monitoring Station is in Santa Isabel, PR, located at a distance of 91.2 kilometers and a bearing of 113° true from the proposed facility. The expected W10BG signal at this location is well below 10 mV/m, thus no adverse effects to the Santa Isabel Monitoring Station are expected from this proposal.

Allocation Considerations

A post-transition interference study¹ has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital TV, LPTV/translator and Class A TV stations. The results of the study are shown in Figure 2.

Using the procedures outlined in the FCC's OET-69 Bulletin, a cell size of 1 kilometer, a distance increment of 0.5 kilometer and a full service out-of-channel emission mask filter, no prohibitive interference is predicted to any other station. If necessary, a waiver of the FCC rules, including Section 74.793 and 74.794, is respectfully requested for the use of the full service mask filter. Grant of the requested waivers is in the public interest, as the potential for first adjacent interference will be reduced.

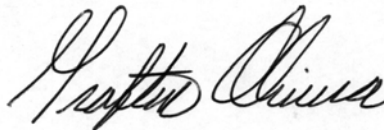
¹ The du Treil, Lundin & Rackley, Inc. TV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 1 km and a distance increment of 0.5 km were employed. An Alpha based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

Radiofrequency Electromagnetic Field Exposure

The proposed W10BG facility was evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the antenna is located 32 meters above ground level. The proposed ERP is 0.3 kW average, circular polarization. Assuming an antenna a worst-case field factor of 0.41 for any depression angle greater than 21 degrees below horizon (see Appendix 2), the highest RF exposure that can be expected at a point 2 meters above ground level corresponds to a power density of 5.3 uW/cm^2 . This is 1.9% of the FCC's recommended limit of 200 uW/cm^2 for channel 10 for an "uncontrolled" environment, and thus in compliance with FCC rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

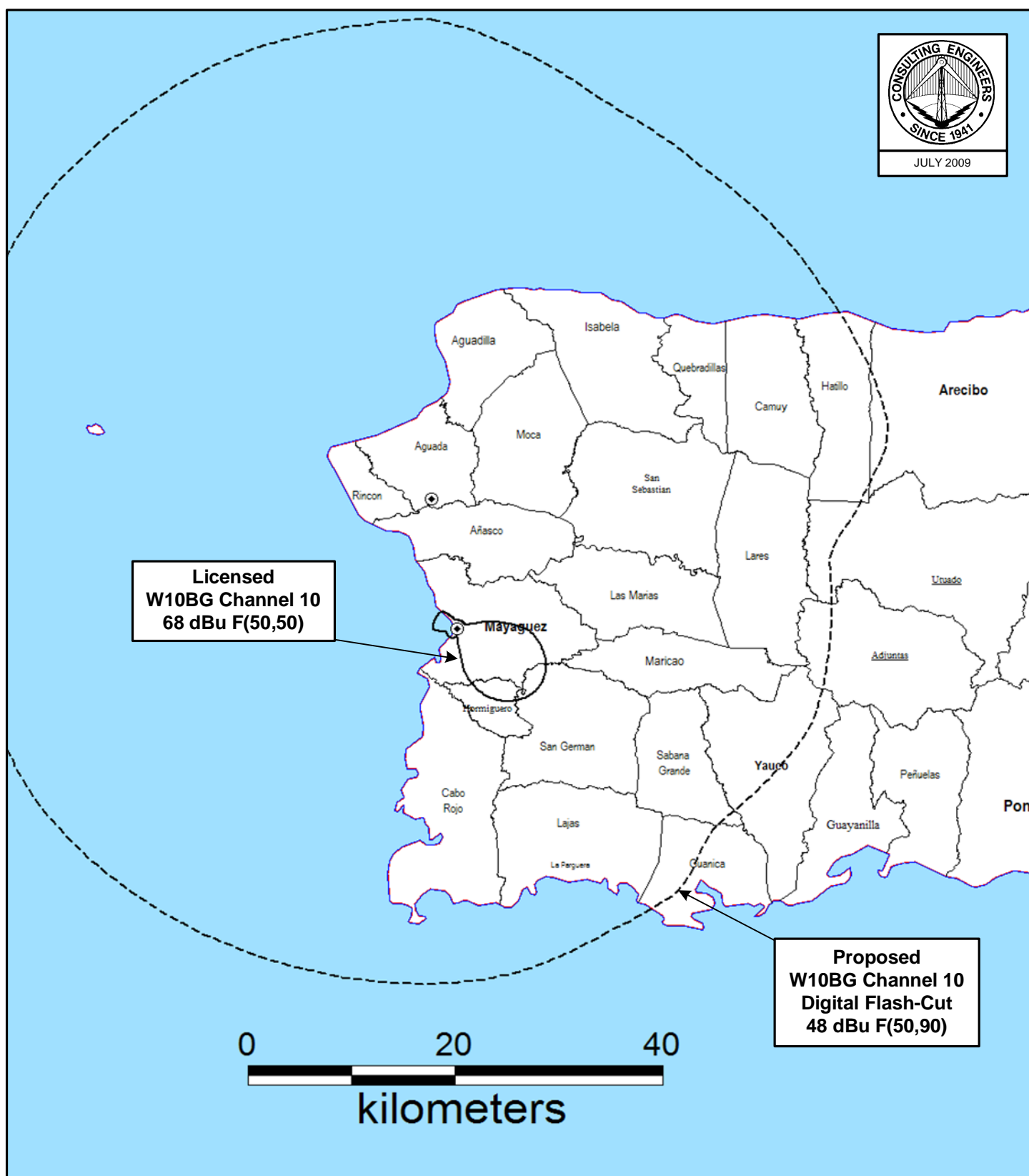
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis shown have been provided to the FCC by the existing tower owner, WIOB(FM).



Grafton Olivera, P.E.
du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000

July 28, 2009

Figure 1



PREDICTED COVERAGE CONTOURS

CLASS A STATION W10BG-LP

MAYAGUEZ, PR

CH 10 0.3 KW 367 M AMSL

du Treil, Lundin & Rackley, Inc Sarasota, Florida

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OET-69 Post-Transition Interference Analysis

W10BG Mayaguez, PR, OET-69 Post-Transition Interference Analysis

Census data selected: 2000

Post DTV Transition Database Selected

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 07-28-2009 Time: 12:16:30

Record Selected for Analysis

NEW USERRECORD-01 ATALAYA PR US
Channel 10 ERP 0.3 kW HAAT 312. m RCAMSL 00367 m FULL SERVICE MASK
Latitude 018-19-33 Longitude 0067-10-13
Status APP Zone 2 Border
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.50 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	48.0 dBu F(50,90) (km)
0.0	0.300	356.7	49.0
45.0	0.300	250.1	42.7
90.0	0.300	232.7	41.8
135.0	0.300	257.3	43.2
180.0	0.300	364.2	49.4
225.0	0.300	359.9	49.2
270.0	0.300	330.5	47.5
315.0	0.300	348.4	48.5

Contour Overlap to Proposed Station

Station			
WSUR-DT	9 PONCE	PR BMPCDT20080613ACK	causes

Contour overlap to Digital LPTV station

NEW	10 ATALAYA	PR USERRECORD01
-----	------------	-----------------

Station		
W10BG	10 MAYAGUEZ	PR BLTVA20040915AAQ

Station inside contour of Digital LPTV station

NEW 10 ATALAYA PR USERRECORD01

Station
W10BG 10 MAYAGUEZ PR BDFCDVA20090105AHZ

Station inside contour of Digital LPTV station
NEW 10 ATALAYA PR USERRECORD01

Contour Overlap Evaluation to Proposed Station Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
10	NEW	ATALAYA PR	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	W09AT	FAJARDO PR	159.9	LIC	BLTTV	-4217
09	WSUR-DT	PONCE PR	65.0	CP MOD	BMPCDT	-20080613ACK
09	WSUR-TV	PONCE PR	65.0	PLN	DTVPLN	-DTVP0216
10	W10CZ-D	SAN JUAN PR	108.5	CP	BDISTVL	-20070607AAX
10	W10CZ-D	SAN JUAN PR	103.5	APP	BDFCDVL	-20081222ABB
10	W10CZ-D	SAN JUAN PR	106.1	CP	BDFCDVL	-20090309ACB
10	WEYA-LP	CHRISTIANSTED VI	258.5	CP	BPTVL	-20050926AEH
11	WLII-DT	CAGUAS PR	111.7	CP MOD	BMPCDT	-20080619AED
11	WLII	CAGUAS PR	111.7	PLN	DTVPLN	-DTVP0342

%%%

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	W09AT	FAJARDO PR	BLTTV	-4217

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	WSUR-DT	PONCE PR	99.2	CP MOD	BMPCDT	-20080613ACK

09	WSUR-TV	PONCE PR	99.2	PLN	DTVPLN	-DTVP0216
10	W10BG	MAYAGUEZ PR	159.9	CP	BDFCDVA	-20090105AHZ
10	W10CZ-D	SAN JUAN PR	52.7	CP	BDISTVL	-20070607AAX
10	W10CZ-D	SAN JUAN PR	56.5	APP	BDFCDVL	-20081222ABB
10	W10CZ-D	SAN JUAN PR	54.1	CP	BDFCDVL	-20090309ACB
10	NEW	ATALAYA PR	159.9	APP	USERRECORD-01	

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	WSUR-DT	PONCE PR	BMPCDT	-20080613ACK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	NEW	ATALAYA PR	65.0	APP	USERRECORD-01	

Total scenarios = 2

Result key: 1

Scenario 1 Affected station 2 WSUR-DT

Before Analysis

Results for: 9A PR PONCE BMPCDT 20080613ACK CP
HAAT 857.0 m, ATV ERP 21.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3799008	50981.0
not affected by terrain losses	3725418	50533.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for: 9A PR PONCE BMPCDT 20080613ACK CP
HAAT 857.0 m, ATV ERP 21.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3799008	50981.0
not affected by terrain losses	3725418	50533.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	6759	30.6
lost to ATV IX only	6759	30.6
lost to all IX	6759	30.6

Potential Interfering Stations Included in above Scenario 1

10A PR ATALAYA USERRECORD01 APP

Percent new IX = 0.1814%

Result key: 2
Scenario 2 Affected station 2 WSUR-DT
Before Analysis

Results for: 9A PR PONCE BMPCDT 20080613ACK CP
HAAT 857.0 m, ATV ERP 21.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3799008	50981.0
not affected by terrain losses	3725418	50533.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 2

After Analysis

Results for: 9A PR PONCE BMPCDT 20080613ACK CP
HAAT 857.0 m, ATV ERP 21.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3799008	50981.0
not affected by terrain losses	3725418	50533.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	6759	30.6
lost to ATV IX only	6759	30.6
lost to all IX	6759	30.6

Potential Interfering Stations Included in above Scenario 2

10A PR ATALAYA USERRECORD01 APP

Percent new IX = 0.1814%

Worst case new IX 0.1814% Scenario 1

#####

Analysis of Interference to Affected Station 3

Analysis of current record
Channel Call City/State Application Ref. No.
09 WSUR-TV PONCE PR DTVPLN -DTVP0216

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	NEW	ATALAYA PR	65.0	APP	USERRECORD-01

Total scenarios = 2

Result key: 3
Scenario 1 Affected station 3 WSUR-TV
Before Analysis

Results for:	9A PR PONCE	DTVPLN	DTVP0216	PLN
HAAT	857.0 m, ATV ERP 15.6 kW			
		POPULATION	AREA (sq km)	
within Noise Limited Contour		3797636	47531.8	
not affected by terrain losses		3707256	47087.3	
lost to NTSC IX		0	0.0	
lost to additional IX by ATV		0	0.0	
lost to ATV IX only		0	0.0	
lost to all IX		0	0.0	

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for:	9A PR PONCE	DTVPLN	DTVP0216	PLN
HAAT	857.0 m, ATV ERP 15.6 kW			
		POPULATION	AREA (sq km)	
within Noise Limited Contour		3797636	47531.8	
not affected by terrain losses		3707256	47087.3	
lost to NTSC IX		0	0.0	
lost to additional IX by ATV		17146	54.2	
lost to ATV IX only		17146	54.2	
lost to all IX		17146	54.2	

Potential Interfering Stations Included in above Scenario 1

10A PR ATALAYA USERRECORD01 APP

Percent new IX = 0.4625%

Result key: 4
Scenario 2 Affected station 3 WSUR-TV
Before Analysis

Results for:	9A PR PONCE	DTVPLN	DTVP0216	PLN
HAAT	857.0 m, ATV ERP 15.6 kW			
		POPULATION	AREA (sq km)	
within Noise Limited Contour		3797636	47531.8	
not affected by terrain losses		3707256	47087.3	
lost to NTSC IX		0	0.0	
lost to additional IX by ATV		0	0.0	
lost to ATV IX only		0	0.0	
lost to all IX		0	0.0	

Potential Interfering Stations Included in above Scenario 2

After Analysis

Results for: 9A PR PONCE DTVPLN DTVP0216 PLN
HAAT 857.0 m, ATV ERP 15.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3797636	47531.8
not affected by terrain losses	3707256	47087.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	17146	54.2
lost to ATV IX only	17146	54.2
lost to all IX	17146	54.2

Potential Interfering Stations Included in above Scenario 2

10A PR ATALAYA USERRECORD01 APP

Percent new IX = 0.4625%

Worst case new IX 0.4625% Scenario 1

#####

Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	W10CZ-D	SAN JUAN PR	BDISTVL -20070607AAX

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
09	W09AT	FAJARDO PR	52.7	LIC	BLTTV -4217
09	WSUR-DT	PONCE PR	53.5	CP MOD	BMPCDT -20080613ACK
09	WSUR-TV	PONCE PR	53.5	PLN	DTVPLN -DTVP0216
10	W10BG	MAYAGUEZ PR	108.5	CP	BDFCDVA -20090105AHZ
10	WEYA-LP	CHRISTIANSTED VI	160.7	CP	BPTVL -20050926AEH
11	WLII-DT	CAGUAS PR	16.4	CP MOD	BMPCDT -20080619AED
11	WLII	CAGUAS PR	16.4	PLN	DTVPLN -DTVP0342
10	NEW	ATALAYA PR	108.5	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	W10CZ-D	SAN JUAN PR	BDFCDVL -20081222ABB

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
09	WSUR-DT	PONCE PR	45.9	CP MOD	BMPCDT -20080613ACK
09	WSUR-TV	PONCE PR	45.9	PLN	DTVPLN -DTVP0216

10	W10BG	MAYAGUEZ PR	103.5	CP	BDFCDVA	-20090105AHZ
11	WLII-DT	CAGUAS PR	11.9	CP MOD	BMPCDT	-20080619AED
11	WLII	CAGUAS PR	11.9	PLN	DTVPLN	-DTVP0342
10	NEW	ATALAYA PR	103.5	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	W10CZ-D	SAN JUAN PR	BDFCDVL -20090309ACB

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
09	WSUR-DT	PONCE PR	45.6	CP MOD	BMPCDT -20080613ACK
09	WSUR-TV	PONCE PR	45.6	PLN	DTVPLN -DTVP0216
10	W10BG	MAYAGUEZ PR	106.1	CP	BDFCDVA -20090105AHZ
11	WLII-DT	CAGUAS PR	5.8	CP MOD	BMPCDT -20080619AED
11	WLII	CAGUAS PR	5.8	PLN	DTVPLN -DTVP0342
10	NEW	ATALAYA PR	106.1	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	WEYA-LP	CHRISTIANSTED VI	BPTVL -20050926AEH

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	W10BG	MAYAGUEZ PR	258.5	CP	BDFCDVA -20090105AHZ
10	W10CZ-D	SAN JUAN PR	160.7	CP	BDISTVL -20070607AAX
10	W10CZ-D	SAN JUAN PR	161.6	APP	BDFCDVL -20081222ABB
10	W10CZ-D	SAN JUAN PR	156.3	CP	BDFCDVL -20090309ACB
10	NEW	ATALAYA PR	258.5	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	WLII-DT	CAGUAS PR	BMPCDT -20080619AED

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
12	WOLE-DT	AGUADILLA PR	93.1	CP MOD	BMPCDT	-20080620AGM
12	WOLE-TV	AGUADILLA PR	93.1	PLN	DTVPLN	-DTVP0400
10	NEW	ATALAYA PR	111.7	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 9

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
11	WLII	CAGUAS PR	DTVPLN	-DTVP0342

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
12	WOLE-DT	AGUADILLA PR	93.1	CP MOD	BMPCDT	-20080620AGM
12	WOLE-TV	AGUADILLA PR	93.1	PLN	DTVPLN	-DTVP0400
10	NEW	ATALAYA PR	111.7	APP	USERRECORD-01	

Proposal causes no interference

#####

Analysis of Interference to Affected Station 10

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	NEW	ATALAYA PR	USERRECORD-01	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	WSUR-DT	PONCE PR	65.0	CP MOD	BMPCDT	-20080613ACK
09	WSUR-TV	PONCE PR	65.0	PLN	DTVPLN	-DTVP0216
10	W10CZ-D	SAN JUAN PR	108.5	CP	BDISTVL	-20070607AAX
10	W10CZ-D	SAN JUAN PR	103.5	APP	BDFCDVL	-20081222ABB
10	W10CZ-D	SAN JUAN PR	106.1	CP	BDFCDVL	-20090309ACB
11	WLII-DT	CAGUAS PR	111.7	CP MOD	BMPCDT	-20080619AED
11	WLII	CAGUAS PR	111.7	PLN	DTVPLN	-DTVP0342

Total scenarios = 4

Result key:

5

Scenario 1 Affected station 10 NEW

Before Analysis

Results for: 10A PR ATALAYA

USERRECORD01

APP

HAAT 312.0 m, ATV ERP 0.3 kW

POPULATION AREA (sq km)

within Noise Limited Contour	682757	6807.3
not affected by terrain losses	666786	6735.4
lost to NTSC IX	3170	9.8
lost to additional IX by ATV	24173	160.5
lost to ATV IX only	26840	166.4
lost to all IX	27343	170.3

Potential Interfering Stations Included in above Scenario 1

10N PR SAN JUAN	BDISTVL	20070607AAX	CP
9A PR PONCE	BMPCDT	20080613ACK	CP

Result key: 6
 Scenario 2 Affected station 10 NEW
 Before Analysis

Results for: 10A PR ATALAYA USERRECORD01 APP
 HAAT 312.0 m, ATV ERP 0.3 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	682757	6807.3
not affected by terrain losses	666786	6735.4
lost to NTSC IX	3170	9.8
lost to additional IX by ATV	22720	129.0
lost to ATV IX only	25387	134.9
lost to all IX	25890	138.8

Potential Interfering Stations Included in above Scenario 2

10N PR SAN JUAN	BDISTVL	20070607AAX	CP
9A PR PONCE	DTVPLN	DTVP0216	PLN

Result key: 7
 Scenario 3 Affected station 10 NEW
 Before Analysis

Results for: 10A PR ATALAYA USERRECORD01 APP
 HAAT 312.0 m, ATV ERP 0.3 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	682757	6807.3
not affected by terrain losses	666786	6735.4
lost to NTSC IX	3170	9.8
lost to additional IX by ATV	24173	160.5
lost to ATV IX only	26840	166.4
lost to all IX	27343	170.3

Potential Interfering Stations Included in above Scenario 3

10N PR SAN JUAN	BDISTVL	20070607AAX	CP
9A PR PONCE	BMPCDT	20080613ACK	CP
10A PR SAN JUAN	BDFCDVL	20081222ABB	APP

Result key: 8
 Scenario 4 Affected station 10 NEW
 Before Analysis

Results for: 10A PR ATALAYA USERRECORD01 APP
 HAAT 312.0 m, ATV ERP 0.3 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	682757	6807.3
not affected by terrain losses	666786	6735.4
lost to NTSC IX	3170	9.8
lost to additional IX by ATV	22720	129.0
lost to ATV IX only	25387	134.9
lost to all IX	25890	138.8

Potential Interfering Stations Included in above Scenario 4

10N PR SAN JUAN	BDISTVL	20070607AAX	CP
9A PR PONCE	DTVPLN	DTVP0216	PLN
10A PR SAN JUAN	BDFCDVL	20081222ABB	APP

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

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FACILITY ID 64864
MAYAGUEZ, PR
CH 10 0.3 KW 367 M AMSL

Notification and Letter of Consent - National Astronomy and Ionosphere Center

{two sheets follow}



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July 28, 2009

Via email (prcz@naic.edu)

Dr. Tim Hankins, Director
Mr. Reinaldo Velez, Spectrum Manager
National Astronomy and Ionosphere Center
Arecibo Observatory
HC3 Box 53995
Arecibo, PR 00612

Gentlemen:

On behalf of our client, television station W10BG, Mayaguez, Puerto Rico and applicant of a modification of its existing digital flash construction permit, in accordance with Section 73.1030 of the FCC Rules, we hereby notify the proposed facility. The particulars of the proposal are as follows:

Proposed Facilities

Geographical coordinates of antenna location (NAD83): 18-19-25.8 / 67-10-11.7
Antenna radiation center height: 32 m AGL; 367 m AMSL
Antenna directivity: see attached antenna pattern
Operating channel: 10 (192-198 MHz)
Type of emission: 6M00D7W
Effective isotropic radiated power: 0.492 kW (Circular Polarization)

The requested digital facilities will substitute the existing analog facilities of W10BG, operating with on the same channel with an ERP of 3 kW.

Please review this proposal and if you find any cause of concern, let us know immediately, so appropriate action can be taken.

Please feel free to communicate via email (<mailto:Grafton@dlr.com>), telefax (941-329-6031) or regular mail.

Very truly yours,

Grafton Olivera, P.E.

NATIONAL ASTRONOMY AND IONOSPHERE CENTER
ARECIBO OBSERVATORY



July 29, 2009

Mr. Grafton Olivera Jr., P.E.
du Treil, Iundin & Rackley, Inc.
201 Fletcher Ave.
Sarasota, Fl. 34237-6019

Re: TV Station W10BG
Mayaguez PR

Dear Grafton Olivera:

Thank you very much for the copy of your FCC application sent to us in accordance with the Puerto Rico Coordination zone agreements. We have considered the technical aspects of your application and find that your installation is unlikely to cause harmful interference to the passive use of the Radio Astronomy bands at the Observatory. We therefore have no objection to your proposed installation.

Sincerely yours,

Reinaldo Velez
Spectrum Manager

RV:ws

Cc: FCC
PRCZ files [File #090729005]

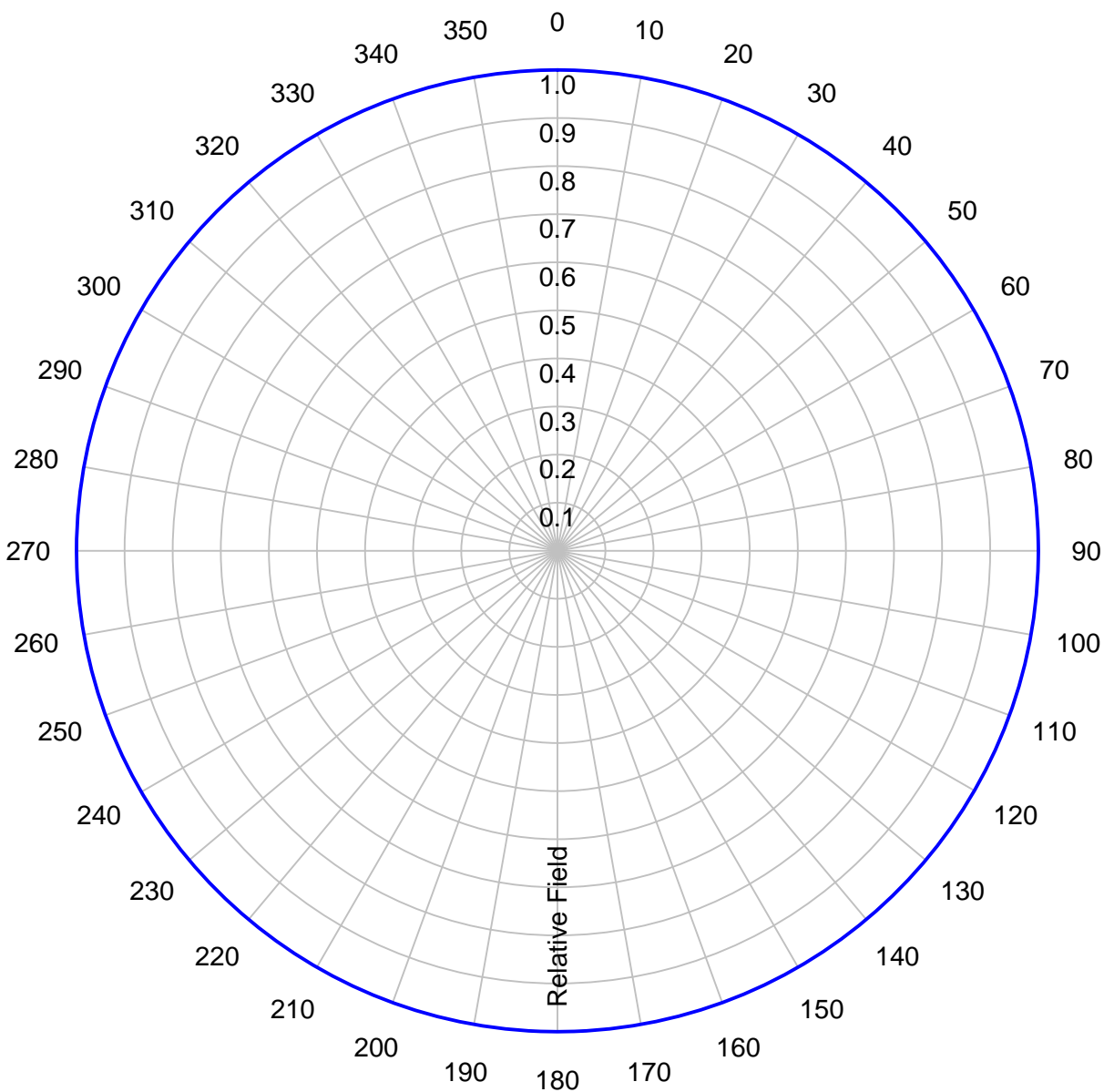
TECHNICAL EXHIBIT
DIGITAL FLASH CUT
CONSTRUCTION PERMIT MODIFICATION APPLICATION
CLASS A STATION W10BG-LP
FACILITY ID 64864
MAYAGUEZ, PR
CH 10 0.3 KW 367 M AMSL

Manufacturer's Horizontal and Vertical Plane Pattern Data

{eight sheets follow}

AZIMUTH PATTERN**Type:**ATW-VHF-O**Channel:**10**Directivity:**NumericdBd**Location:**Mayaguez, PR**Peak(s) at:**1.000.00**Polarization:**Horizontal

Note: Pattern shape and directivity may vary with channel and mouting configuration.



Preliminary, subject to final design and review.

TABULATED DATA FOR AZIMUTH PATTERN FCC FILING FORMAT

Type ~~ATW~~ VHF-O

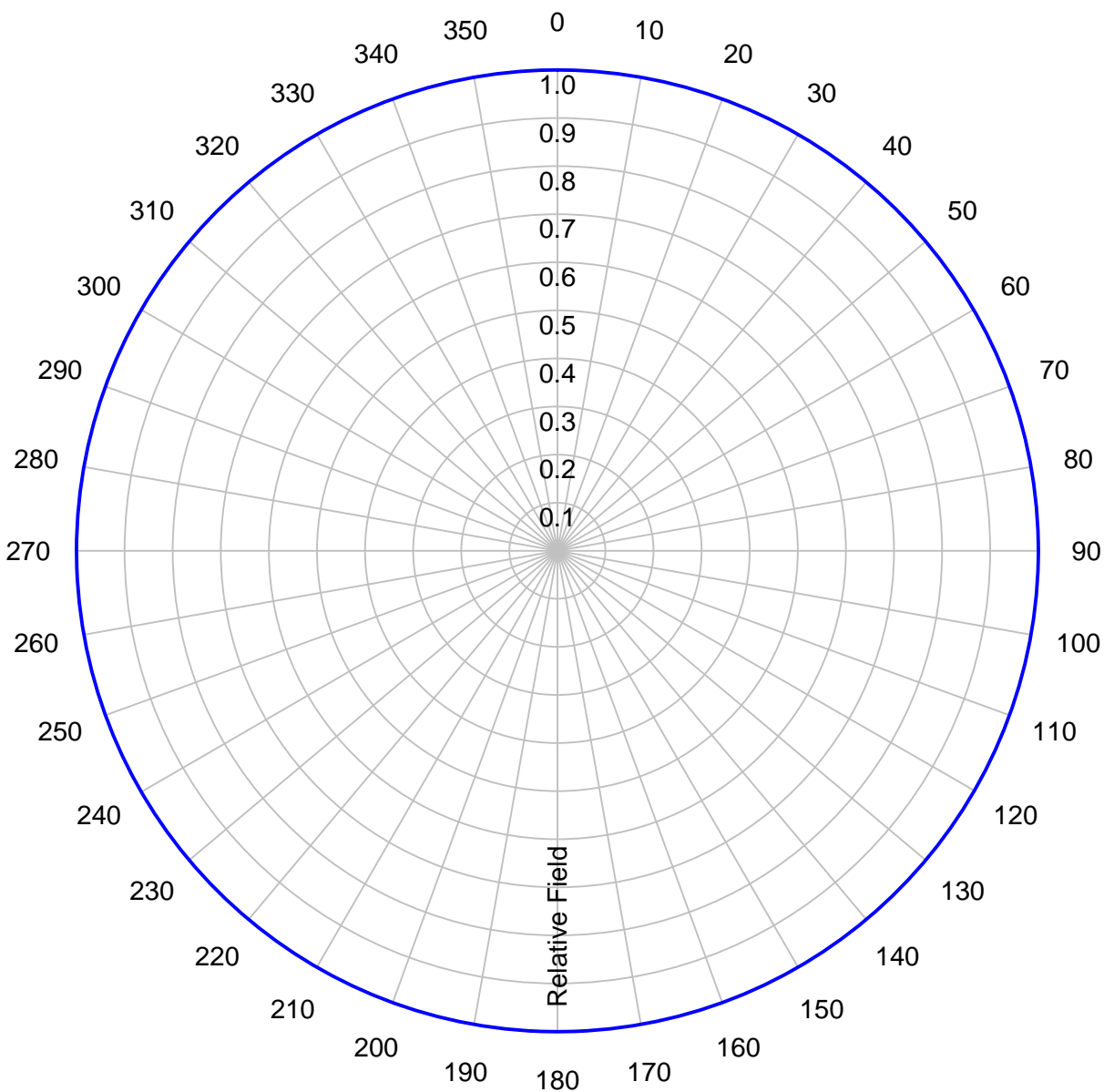
Polarization Horizontal

ANGLE	FIELD	ERP (kW)	ERP (dBk)
0	1.000	0.300	-5.234
10	1.000	0.300	-5.234
20	1.000	0.300	-5.234
30	1.000	0.300	-5.234
40	1.000	0.300	-5.234
50	1.000	0.300	-5.234
60	1.000	0.300	-5.234
70	1.000	0.300	-5.234
80	1.000	0.300	-5.234
90	1.000	0.300	-5.234
100	1.000	0.300	-5.234
110	1.000	0.300	-5.234
120	1.000	0.300	-5.234
130	1.000	0.300	-5.234
140	1.000	0.300	-5.234
150	1.000	0.300	-5.234
160	1.000	0.300	-5.234
170	1.000	0.300	-5.234
180	1.000	0.300	-5.234
190	1.000	0.300	-5.234
200	1.000	0.300	-5.234
210	1.000	0.300	-5.234
220	1.000	0.300	-5.234
230	1.000	0.300	-5.234
240	1.000	0.300	-5.234
250	1.000	0.300	-5.234
260	1.000	0.300	-5.234
270	1.000	0.300	-5.234
280	1.000	0.300	-5.234
290	1.000	0.300	-5.234
300	1.000	0.300	-5.234
310	1.000	0.300	-5.234
320	1.000	0.300	-5.234
330	1.000	0.300	-5.234
340	1.000	0.300	-5.234
350	1.000	0.300	-5.234

Preliminary, subject to final design and review.

AZIMUTH PATTERN**Type:**ATW-VHF-O**Channel:**10**Directivity:**NumericdBd**Location:**Mayaguez, PR**Peak(s) at:**1.000.00**Polarization:**Vertical

Note: Pattern shape and directivity may vary with channel and mouting configuration.



Preliminary, subject to final design and review.

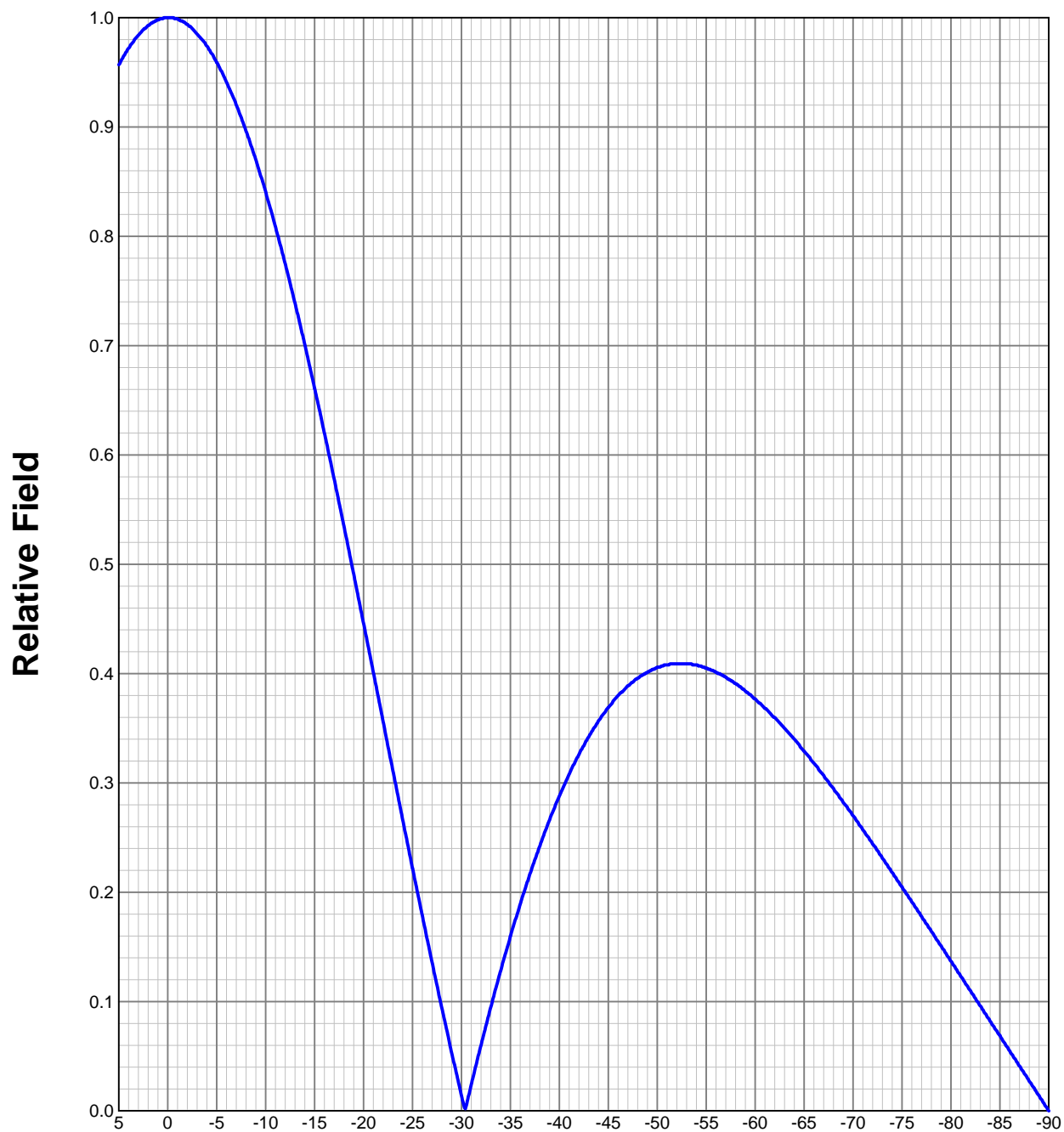
TABULATED DATA FOR AZIMUTH PATTERN FCC FILING FORMAT

Type: ~~ATW~~ TW-VHF-O

Polarization: Vertical

ANGLE	FIELD	ERP (kW)	ERP (dBk)
0	1.000	0.300	-5.234
10	1.000	0.300	-5.234
20	1.000	0.300	-5.234
30	1.000	0.300	-5.234
40	1.000	0.300	-5.234
50	1.000	0.300	-5.234
60	1.000	0.300	-5.234
70	1.000	0.300	-5.234
80	1.000	0.300	-5.234
90	1.000	0.300	-5.234
100	1.000	0.300	-5.234
110	1.000	0.300	-5.234
120	1.000	0.300	-5.234
130	1.000	0.300	-5.234
140	1.000	0.300	-5.234
150	1.000	0.300	-5.234
160	1.000	0.300	-5.234
170	1.000	0.300	-5.234
180	1.000	0.300	-5.234
190	1.000	0.300	-5.234
200	1.000	0.300	-5.234
210	1.000	0.300	-5.234
220	1.000	0.300	-5.234
230	1.000	0.300	-5.234
240	1.000	0.300	-5.234
250	1.000	0.300	-5.234
260	1.000	0.300	-5.234
270	1.000	0.300	-5.234
280	1.000	0.300	-5.234
290	1.000	0.300	-5.234
300	1.000	0.300	-5.234
310	1.000	0.300	-5.234
320	1.000	0.300	-5.234
330	1.000	0.300	-5.234
340	1.000	0.300	-5.234
350	1.000	0.300	-5.234

Preliminary, subject to final design and review.

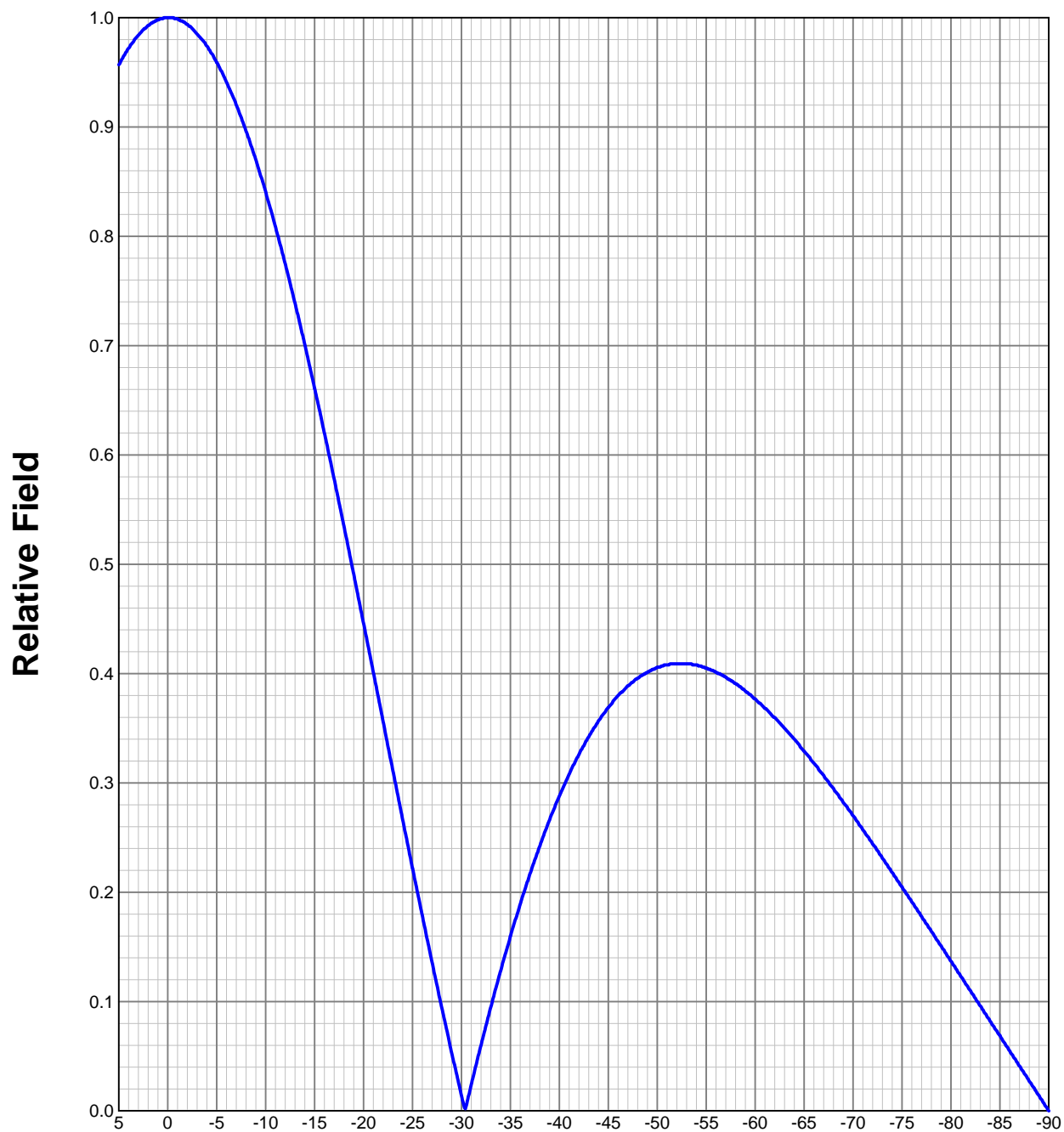
ELEVATION PATTERN**Type:****ATW2V1H****Channel:****10****Directivity:****Numeric****dBd****Location:****Mayaguez, PR****Main Lobe:****2.00****3.01****Beam Tilt:****-0.25****Horizontal:****2.00****3.01****Polarization:****Horizontal***Preliminary, subject to final design and review.*

TABULATED DATA FOR ELEVATION PATTERN

Type: ATW2V1H
Polarization: Horizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.957	-0.38	-6.75	0.926	-0.67	-27.00	0.136	-17.33	-50.50
4.75	0.961	-0.35	-7.00	0.920	-0.72	-27.50	0.115	-18.79	-51.00
4.50	0.965	-0.31	-7.25	0.915	-0.78	-28.00	0.094	-20.54	-51.50
4.25	0.968	-0.28	-7.50	0.909	-0.83	-28.50	0.074	-22.62	-52.00
4.00	0.972	-0.25	-7.75	0.903	-0.89	-29.00	0.053	-25.51	-52.50
3.75	0.976	-0.22	-8.00	0.896	-0.95	-29.50	0.034	-29.37	-53.00
3.50	0.978	-0.19	-8.25	0.890	-1.01	-30.00	0.014	-37.08	-53.50
3.25	0.982	-0.16	-8.50	0.883	-1.08	-30.50	0.005	-46.02	-54.00
3.00	0.984	-0.14	-8.75	0.877	-1.14	-31.00	0.024	-32.40	-54.50
2.75	0.986	-0.12	-9.00	0.870	-1.21	-31.50	0.042	-27.54	-55.00
2.50	0.989	-0.10	-9.25	0.863	-1.28	-32.00	0.060	-24.44	-55.50
2.25	0.990	-0.08	-9.50	0.855	-1.36	-32.50	0.078	-22.16	-56.00
2.00	0.993	-0.06	-9.75	0.849	-1.43	-33.00	0.095	-20.45	-56.50
1.75	0.994	-0.05	-10.00	0.841	-1.50	-33.50	0.112	-19.02	-57.00
1.50	0.996	-0.03	-10.50	0.825	-1.67	-34.00	0.128	-17.86	-57.50
1.25	0.997	-0.03	-11.00	0.809	-1.84	-34.50	0.144	-16.83	-58.00
1.00	0.998	-0.02	-11.50	0.792	-2.03	-35.00	0.160	-15.92	-58.50
0.75	0.999	-0.01	-12.00	0.775	-2.21	-35.50	0.175	-15.14	-59.00
0.50	0.999	-0.01	-12.50	0.757	-2.42	-36.00	0.189	-14.47	-59.50
0.25	1.000	0.00	-13.00	0.739	-2.63	-36.50	0.203	-13.85	-60.00
0.00	1.000	0.00	-13.50	0.720	-2.85	-37.00	0.217	-13.27	-60.50
-0.25	1.000	0.00	-14.00	0.701	-3.09	-37.50	0.230	-12.77	-61.00
-0.50	1.000	0.00	-14.50	0.681	-3.34	-38.00	0.242	-12.32	-61.50
-0.75	0.999	-0.01	-15.00	0.661	-3.60	-38.50	0.255	-11.87	-62.00
-1.00	0.999	-0.01	-15.50	0.641	-3.86	-39.00	0.266	-11.50	-62.50
-1.25	0.998	-0.02	-16.00	0.620	-4.15	-39.50	0.277	-11.15	-63.00
-1.50	0.997	-0.03	-16.50	0.599	-4.45	-40.00	0.288	-10.81	-63.50
-1.75	0.996	-0.04	-17.00	0.578	-4.76	-40.50	0.298	-10.52	-64.00
-2.00	0.994	-0.05	-17.50	0.556	-5.10	-41.00	0.308	-10.23	-64.50
-2.25	0.992	-0.07	-18.00	0.535	-5.43	-41.50	0.317	-9.98	-65.00
-2.50	0.990	-0.09	-18.50	0.513	-5.80	-42.00	0.326	-9.74	-65.50
-2.75	0.988	-0.11	-19.00	0.491	-6.18	-42.50	0.334	-9.53	-66.00
-3.00	0.985	-0.13	-19.50	0.468	-6.60	-43.00	0.342	-9.32	-66.50
-3.25	0.982	-0.15	-20.00	0.446	-7.01	-43.50	0.350	-9.12	-67.00
-3.50	0.980	-0.18	-20.50	0.424	-7.45	-44.00	0.357	-8.95	-67.50
-3.75	0.978	-0.20	-21.00	0.401	-7.94	-44.50	0.363	-8.80	-68.00
-4.00	0.974	-0.23	-21.50	0.379	-8.43	-45.00	0.369	-8.66	-68.50
-4.25	0.970	-0.26	-22.00	0.356	-8.97	-45.50	0.375	-8.52	-69.00
-4.50	0.967	-0.29	-22.50	0.333	-9.55	-46.00	0.380	-8.40	-69.50
-4.75	0.963	-0.33	-23.00	0.311	-10.14	-46.50	0.384	-8.31	-70.00
-5.00	0.959	-0.36	-23.50	0.289	-10.78	-47.00	0.389	-8.20	-70.50
-5.25	0.955	-0.40	-24.00	0.266	-11.50	-47.50	0.392	-8.13	-71.00
-5.50	0.951	-0.44	-24.50	0.244	-12.25	-48.00	0.396	-8.05	-71.50
-5.75	0.946	-0.48	-25.00	0.222	-13.07	-48.50	0.399	-7.98	-72.00
-6.00	0.941	-0.53	-25.50	0.200	-13.98	-49.00	0.401	-7.94	-72.50
-6.25	0.936	-0.57	-26.00	0.179	-14.94	-49.50	0.404	-7.87	-73.00
-6.50	0.931	-0.62	-26.50	0.157	-16.08	-50.00	0.406	-7.83	-73.50

Preliminary, subject to final design and review.

ELEVATION PATTERN**Type:****ATW2V1V****Channel:****10****Directivity:****Numeric****dBd****Location:****Mayaguez, PR****Main Lobe:****2.00****3.01****Beam Tilt:****-0.25****Horizontal:****2.00****3.01****Polarization:****Vertical***Preliminary, subject to final design and review.*

TABULATED DATA FOR ELEVATION PATTERN

Type: ATW2V1V
Polarization: Vertical

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.957	-0.38	-6.75	0.926	-0.67	-27.00	0.136	-17.33	-50.50
4.75	0.961	-0.35	-7.00	0.920	-0.72	-27.50	0.115	-18.79	-51.00
4.50	0.965	-0.31	-7.25	0.915	-0.78	-28.00	0.094	-20.54	-51.50
4.25	0.968	-0.28	-7.50	0.909	-0.83	-28.50	0.074	-22.62	-52.00
4.00	0.972	-0.25	-7.75	0.903	-0.89	-29.00	0.053	-25.51	-52.50
3.75	0.976	-0.22	-8.00	0.896	-0.95	-29.50	0.034	-29.37	-53.00
3.50	0.978	-0.19	-8.25	0.890	-1.01	-30.00	0.014	-37.08	-53.50
3.25	0.982	-0.16	-8.50	0.883	-1.08	-30.50	0.005	-46.02	-54.00
3.00	0.984	-0.14	-8.75	0.877	-1.14	-31.00	0.024	-32.40	-54.50
2.75	0.986	-0.12	-9.00	0.870	-1.21	-31.50	0.042	-27.54	-55.00
2.50	0.989	-0.10	-9.25	0.863	-1.28	-32.00	0.060	-24.44	-55.50
2.25	0.990	-0.08	-9.50	0.855	-1.36	-32.50	0.078	-22.16	-56.00
2.00	0.993	-0.06	-9.75	0.849	-1.43	-33.00	0.095	-20.45	-56.50
1.75	0.994	-0.05	-10.00	0.841	-1.50	-33.50	0.112	-19.02	-57.00
1.50	0.996	-0.03	-10.50	0.825	-1.67	-34.00	0.128	-17.86	-57.50
1.25	0.997	-0.03	-11.00	0.809	-1.84	-34.50	0.144	-16.83	-58.00
1.00	0.998	-0.02	-11.50	0.792	-2.03	-35.00	0.160	-15.92	-58.50
0.75	0.999	-0.01	-12.00	0.775	-2.21	-35.50	0.175	-15.14	-59.00
0.50	0.999	-0.01	-12.50	0.757	-2.42	-36.00	0.189	-14.47	-59.50
0.25	1.000	0.00	-13.00	0.739	-2.63	-36.50	0.203	-13.85	-60.00
0.00	1.000	0.00	-13.50	0.720	-2.85	-37.00	0.217	-13.27	-60.50
-0.25	1.000	0.00	-14.00	0.701	-3.09	-37.50	0.230	-12.77	-61.00
-0.50	1.000	0.00	-14.50	0.681	-3.34	-38.00	0.242	-12.32	-61.50
-0.75	0.999	-0.01	-15.00	0.661	-3.60	-38.50	0.255	-11.87	-62.00
-1.00	0.999	-0.01	-15.50	0.641	-3.86	-39.00	0.266	-11.50	-62.50
-1.25	0.998	-0.02	-16.00	0.620	-4.15	-39.50	0.277	-11.15	-63.00
-1.50	0.997	-0.03	-16.50	0.599	-4.45	-40.00	0.288	-10.81	-63.50
-1.75	0.996	-0.04	-17.00	0.578	-4.76	-40.50	0.298	-10.52	-64.00
-2.00	0.994	-0.05	-17.50	0.556	-5.10	-41.00	0.308	-10.23	-64.50
-2.25	0.992	-0.07	-18.00	0.535	-5.43	-41.50	0.317	-9.98	-65.00
-2.50	0.990	-0.09	-18.50	0.513	-5.80	-42.00	0.326	-9.74	-65.50
-2.75	0.988	-0.11	-19.00	0.491	-6.18	-42.50	0.334	-9.53	-66.00
-3.00	0.985	-0.13	-19.50	0.468	-6.60	-43.00	0.342	-9.32	-66.50
-3.25	0.982	-0.15	-20.00	0.446	-7.01	-43.50	0.350	-9.12	-67.00
-3.50	0.980	-0.18	-20.50	0.424	-7.45	-44.00	0.357	-8.95	-67.50
-3.75	0.978	-0.20	-21.00	0.401	-7.94	-44.50	0.363	-8.80	-68.00
-4.00	0.974	-0.23	-21.50	0.379	-8.43	-45.00	0.369	-8.66	-68.50
-4.25	0.970	-0.26	-22.00	0.356	-8.97	-45.50	0.375	-8.52	-69.00
-4.50	0.967	-0.29	-22.50	0.333	-9.55	-46.00	0.380	-8.40	-69.50
-4.75	0.963	-0.33	-23.00	0.311	-10.14	-46.50	0.384	-8.31	-70.00
-5.00	0.959	-0.36	-23.50	0.289	-10.78	-47.00	0.389	-8.20	-70.50
-5.25	0.955	-0.40	-24.00	0.266	-11.50	-47.50	0.392	-8.13	-71.00
-5.50	0.951	-0.44	-24.50	0.244	-12.25	-48.00	0.396	-8.05	-71.50
-5.75	0.946	-0.48	-25.00	0.222	-13.07	-48.50	0.399	-7.98	-72.00
-6.00	0.941	-0.53	-25.50	0.200	-13.98	-49.00	0.401	-7.94	-72.50
-6.25	0.936	-0.57	-26.00	0.179	-14.94	-49.50	0.404	-7.87	-73.00
-6.50	0.931	-0.62	-26.50	0.157	-16.08	-50.00	0.406	-7.83	-73.50

Preliminary, subject to final design and review.