

TECHNICAL EXHIBIT
DISPLACEMENT APPLICATION
STATION WVQS-LP (FACILITY ID 32144)
ISABEL SEGUNDA, PR
CH 50 22.3 KW (MAX-DA)

Technical Narrative

This Technical Exhibit supports an amendment to the displacement application for low power television station WVQS-LP (BDISTTL-20070405AAB). WVQS-LP is licensed to operate on analog channel 28 with a non-directional antenna (visual) effective radiated power (ERP) of 10 kW and an antenna height above mean sea level (RCAMSL) of 157 meters (BLTTL-19980803JE).

This amendment supplies the recently acquired tower registration number (ASRN) and also includes a letter of approval from the Arecibo Observatory.

Station WVQS-LP receives interference to 80% of its analog service population from DTV station WKAQ-DT, San Juan (see Figure 1). WKAQ-DT operates on channel 28 from a transmitter site 65 kilometers west of the WVQS-LP site. Thus, WVQS-LP hereby requests to displace to another channel for its analog operation.

Proposed Facilities

WVQS-LP proposes to change to channel 50, increase ERP and employ a directional antenna. There is no proposed change in transmitter site (18-07-50 N, 65-26-29 W). It is proposed to operate with a directional antenna maximum ERP of 22.3 kW and antenna RCAMSL of 154 meters. No carrier frequency offset is proposed.

Figure 3 is a coverage map showing the present and proposed 74 dBu coverage contours. As the proposal will operate from the currently licensed operation, there will be common area where both 74 dBu contours overlap.

Allocation Considerations

A study 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.

Using the procedures outlined in the FCC's OET-69 Bulletin, no interference is predicted to occur to any other station. If necessary, a waiver of the FCC rules is respectfully requested based on use of the procedures outlined in the FCC's OET-69 Bulletin to the remaining LPTV/translator stations.

The applicant recognizes the proposal is secondary to authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation.

Radiofrequency Electromagnetic Field Exposure

The proposed WVQS-LP facilities were 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 21 meters above ground level. The proposed maximum ERP is 22.3 kW. A conservative relative field value of 0.2 was assumed for the directional antenna's downward radiation (see Figure 4). The calculated power density at a point 2 meters (6.6 feet) above ground level is 0.046 mW/cm^2 . This is 10% of the FCC's recommended limit of 0.46 mW/cm^2 for channel 50 for an "uncontrolled" environment. Since

there are no other known broadcast operations in the vicinity, WVQS-LP is the sole contributor and is under 100%, thus in compliance.

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 will be or already have been provided to the FCC by the tower owner as part of the tower registration process.



Jonathan N. Edwards
du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000

May 30, 2007

Census data selected: 1990

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-21-2007 Time: 12:23:40

Record Selected for Analysis

WVQS-LP BLTTL -19980803JE ISABEL SEGUNDA PR US
Channel 28 ERP 10. kW HAAT 00999 m RCAMSL 00157 m
Latitude 018-07-50 Longitude 0065-26-29
Status LIC Zone Border Offset +
Last update 00000000 Cutoff date 00000000 Docket
Comments
Applicant JUAN G PADIN

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	74.0 dBu F(50,50) (km)
0.0	10.000	157.0	18.7
45.0	10.000	153.9	18.5
90.0	10.000	124.2	16.3
135.0	10.000	157.0	18.7
180.0	10.000	157.0	18.7
225.0	10.000	152.1	18.4
270.0	10.000	140.4	17.5
315.0	10.000	157.0	18.7

Contour Overlap Evaluation from LPTV Station to Full Service TV & DTV

Station inside contour of station

WAPA-TV 27 SAN JUAN PR BLCDT 20060621ACQ

Station inside contour of station

WKAQ-TV 28 SAN JUAN PR BLCDT 20020201AAG

Contour Overlap Evaluation from LPTV to Full Service TV & DTV Complete

Contour Overlap Evaluation from LPTV Station to LPTV Stations

No Spacing violations or contour overlap from LPTV station

Contour Overlap Evaluation from LPTV to LPTV Stations Complete

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite 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	
28	WVQS-LP	ISABEL SEGUNDA PR	BLTTL	19980803JE

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
27	WAPA-TV	SAN JUAN PR	64.5	LIC	BLCDDT	-20060621ACQ
28	WKAQ-TV	SAN JUAN PR	64.6	LIC	BLCDDT	-20020201AAG

%%%

Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
28	WVQS-LP	ISABEL SEGUNDA PR	BLTTL	-19980803JE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
20	WSVI	CHRISTIANSTED VI	79.7	CP	BPCDDT	-19991028AED
20	WSVI-DT	CHRISTIANSTED VI	79.7	PLN	DTVPLN	-DTVP0423
21	WJPX	SAN JUAN PR	46.6	LIC	BLCDDT	-20060621ACJ
21	WSJN-DT	SAN JUAN PR	46.6	PLN	DTVPLN	-DTVP0454
25	WQTO	PONCE PR	138.2	LIC	BLEDT	-20060615ACV
25	WQTO-DT	PONCE PR	138.2	PLN	DTVPLN	-DTVP0616
27	WAPA-DT	SAN JUAN PR	64.5	PLN	DTVPLN	-DTVP0687
27	WAPA-TV	SAN JUAN PR	64.5	LIC	BLCDDT	-20060621ACQ
28	WKAQ-TV	SAN JUAN PR	64.6	LIC	BLCDDT	-20020201AAG
28	WKAQ-DT	SAN JUAN PR	64.6	PLN	DTVPLN	-DTVP0724
29	W29CB	ST. THOMAS VI	56.1	LIC	BLTTL	-19971105II
31	WRWR-DT	SAN JUAN PR	70.7	PLN	DTVPLN	-DTVP0839
31	WSJU-TV	SAN JUAN PR	70.7	CP MOD	BMPCDDT	-20060628ACE
32	WTCV	SAN JUAN PR	70.7	LIC	BLCDDT	-20040722ADD
32	WSJU-DT	SAN JUAN PR	42.3	PLN	DTVPLN	-DTVP0879
42	WIRS	YAUCO PR	120.0	LIC	BLCT	-19920207KF
43	WSUR-DT	PONCE PR	120.0	PLN	DTVPLN	-DTVP1241
43	WZVI	CHARLOTTE AMALIE VI	59.1	LIC	BLCDDT	-20040517AFB

Total scenarios = 2

Result key: 1
Scenario 1 Affected station 3 WVQS-LP
Before Analysis

Results for: 28N PR ISABEL SEGUNDA	BLTTL	19980803JE	LIC
	POPULATION	AREA (sq km)	
within Noise Limited Contour	9106	1169.0	
not affected by terrain losses	9106	1132.5	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	7272	1076.3	
lost to all IX	7272	1076.3	

Potential Interfering Stations Included in above Scenario 1

28A PR SAN JUAN BLCDT 20020201AAG LIC

Result key: 2
Scenario 2 Affected station 3 WVQS-LP
Before Analysis

Results for: 28N PR ISABEL SEGUNDA	BLTTL	19980803JE	LIC
	POPULATION	AREA (sq km)	
within Noise Limited Contour	9106	1169.0	
not affected by terrain losses	9106	1132.5	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	7272	1077.3	
lost to all IX	7272	1077.3	

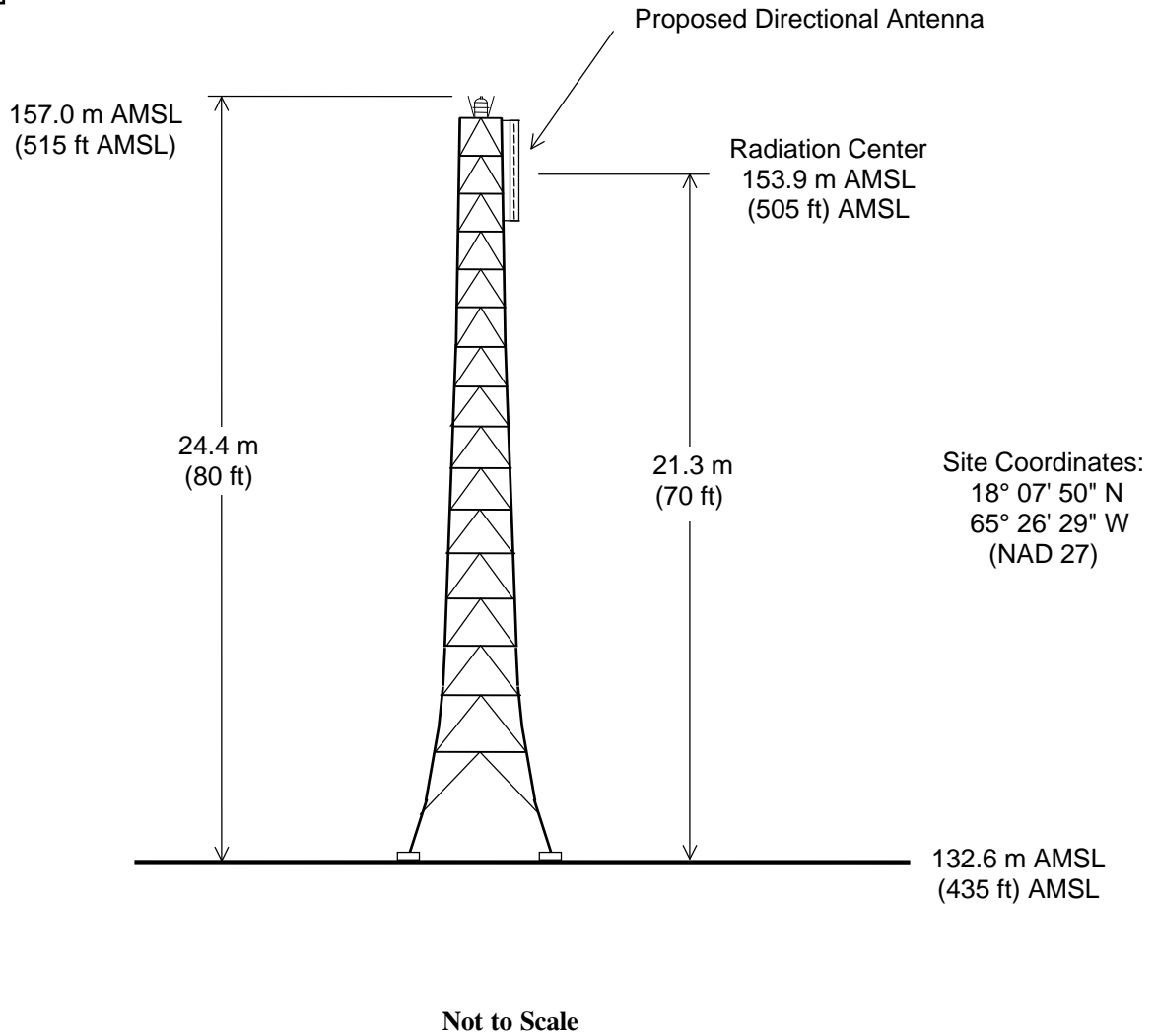
Potential Interfering Stations Included in above Scenario 2

28A PR SAN JUAN DTVPLN DTVP0724 PLN

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

ASRN: 1258538

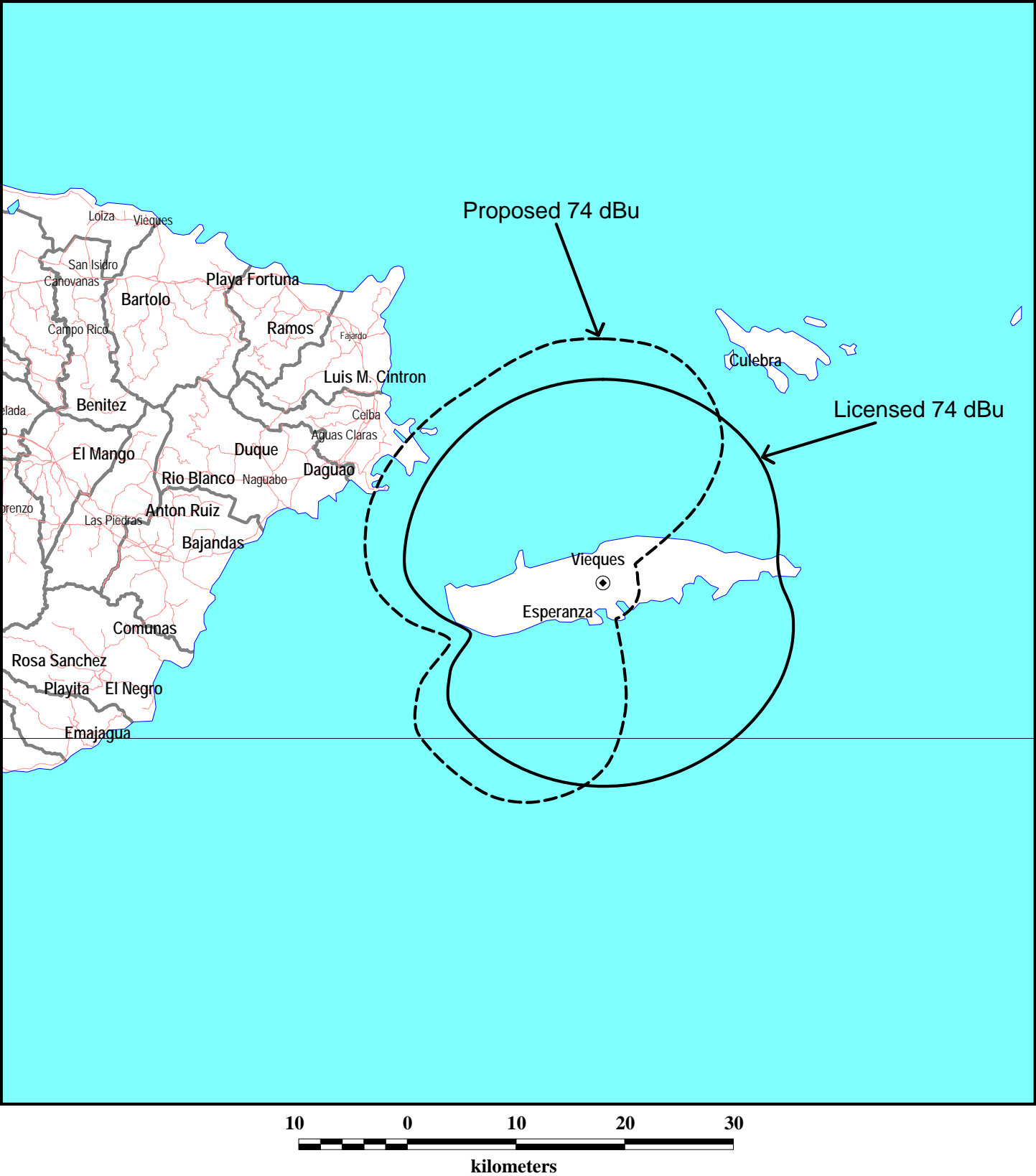


ANTENNA AND SUPPORTING STRUCTURE

STATION WVQS-LP
ISABEL SEGUNDA
CH 50 22.3 KW (MAX-DA)

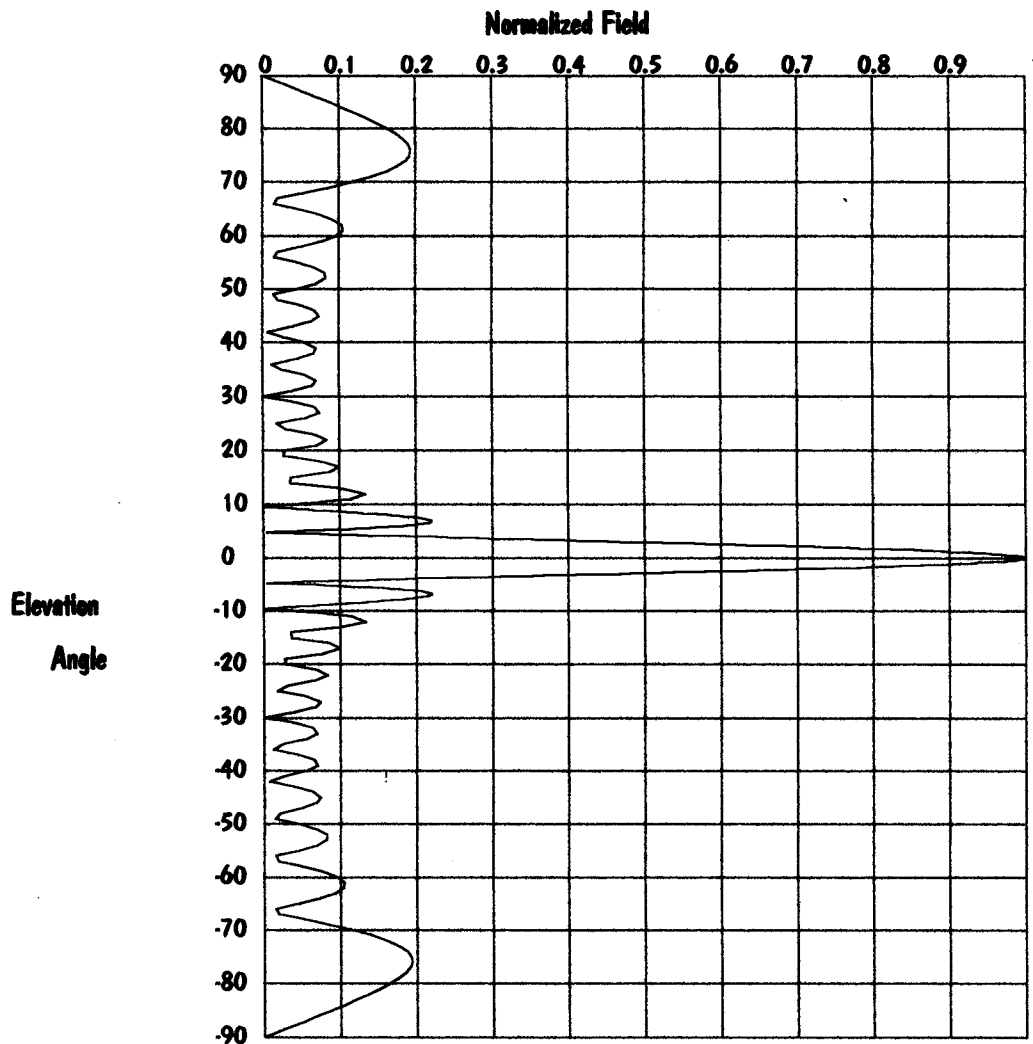
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 3



PREDICTED COVERAGE CONTOURS
STATION WVQS-LP
ISABEL SEGUNDA, PUERTO RICO
CH 50 22.3 kW (MAX-DA)
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 4



Elevation Pattern

Scale: Linear

Units: Absolute

Antenna Concepts Inc.

CLIENT: *du Triol, Landon & Rackley, Inc*

Date: 4/13/1998

ANTENNA TYPE: *ACS/2 bay Low Power slot*

FREQUENCY: *UHF*

PATTERN POL.: *Horizontal*

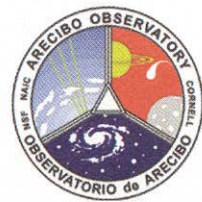
Beam Tilt (Deg.): *0*

Elev. DIRECTIVITY: *13.747/ 11.382dBd*

Null Fill (%): *, ,*

Software Design by: *Micro-Tek Engineering*

NATIONAL ASTRONOMY AND IONOSPHERE CENTER
ARECIBO OBSERVATORY



April 10, 2007

Mr. Juan G. Padin, P.E.
JGP Engineering Group Corp.
PO Box 142755
Arecibo, PR 00614

Re: CH. 50 WVQS-LP Facility ID 32144
File # BDISTTL-20070405AAB

Dear Juan G. Padin, P.E.:

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,

Dr. Bob Kerr
Director

Reinaldo Velez
Spectrum Manager

RV:ws

Cc: FCC
PRCZ files [File #00704006]